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OPPENHEIM'S MYATONIA

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In 1900 Oppenheim described a remarkable condition in children, characterized by a serious loss of the motor functions and high-grade flaccidity in large groups of muscles. The symptoms are noticed usually soon after birth, more rarely in later infancy.

The muscles of the neck, extremities and trunk may all be affected, but usually only the extremities are involved. The legs suffer from a greater degree of weakness than the arms. Thus the patient may show only a slight loss of power in the arms and almost complete paraplegia. The baby may be able to grasp objects and handle its bottle, but it cannot kick or move its legs. The atony may vary from a pronounced weakness of the extremities to almost complete paralysis. One arm or leg may be less efficient than its fellow. In extreme cases a baby may lie breathing and nursing and incapable of moving either upper or lower extremities. Sometimes the extremities may be helpless, but the child moves its fingers and toes. The chief feature of the little patient is his inactivity, suggesting a high-grade muscular weakness.

Although spontaneous movements are lacking there is no complete destruction of motor function. Traces of power remain in all muscles but their action is languid and inefficient. When motion is produced by painful stimulation it is executed with perfect coordination.

As the child grows older its infirmity grows more evident. With the neck muscles weak, the head wobbles about and cannot be held erect; with the trunk muscles affected, the attitude of kyphosis is present in sitting. There is no loss of power in the sphincters; the arms show varying degrees of weakness. Walking and standing are impossible; if the child is placed on his feet the knees double up and it sinks on the floor.

In only two cases were the arms weaker than the legs.

On palpation the muscles are found soft and flabby. The extremities may be found thin, but no atrophy is present. Some cases show a fair amount of adipose tissue. Hypermobility of the articulation is nearly always seen. The joints make wide and abnormal excursions. In my case the joints were as movable as those of a doll; the feet could be placed behind the back or ears. In Tobler's[1] case the child's habitual attitude was to lie with its head between its feet. The flail-like joints are due to relaxed ligaments and flaccid muscles.

In contradistinction to the condition in poliomyelitis in myatonia the faradic and galvanic irritability, while often diminished, is seldom lost. It may be present in some muscles and absent in others. The reaction of degeneration is never found.

The mental condition is always fair or normal; some patients at three or four years seem backward, owing to their inactivity, malnutrition and inability to play with other children.

The condition should not be confused with the incoordination and awkward motor functions of an idiot.

COURSE OF THE DISEASE

Although the condition is congenital, it may not attract serious attention until later infancy, being regarded as a retarded development tending to betterment or recovery. No authentic cases are observed in adults. We may surmise that the muscular weakness is outgrown or more probably, owing to lowered resistance, the patients die in childhood of intercurrent maladies.

As for the course of the malady, many of the cases reported were in young, limp, apathetic babies. They were accurately described and soon lost sight of. About one-third died of pneumonia. Respiratory affections were especially fatal, owing to the feeble thoracic muscles.

If the patient lives, strength is apt to return to large groups of the muscles. No patient recovers completely. The arms improve faster than the legs. The child may learn to use its hands and arms in a normal way, but either cannot stand at all or walks awkwardly with quick fatigue. Berti's[2] patient, at birth, could only move its head; at 18 months it could only lift up its arms. Cattanee's[3] patient at 4 months showed only slight movements of the hands and feet and could not lift up its head.

In Comby's[4] boy, aged 2½ years, the hands were used unskilfully; the child could sit, but with kyphosis; could move legs, but could not stand or walk; muscles were soft, but not atrophic; knee-jerks absent; intellect normal.

In Haberman's[5] case, that of a girl 3½ years old, the condition dated from birth; the patient could move upper extremities in all directions, but with some weakness. There was great hypotonia of lower extremities; the muscles were flabby; knee-jerks absent. The patient walked with effort if supported. There was reduction of electrical irritability; intellect was normal. My patient at 3 years 9 months could use its hands well; could walk in a clumsy waddling way. No patient has been observed over 7 years of age.

ETIOLOGY

The cause of myatonia is obscure. Neither heredity nor sex has any influence. Age is very important. In

1. Monatschr. f. Psychiat. u. Neurol., 1900, viii, 232.
2. Jahrb. f. Kinderh., 1907, lxiv, 33.
3. Clin. mod., 1906, xi, 282.
4. Arch. de méd. des enf., 1906, ix, 552.
5. Am. Jour. Med. Sc., 1910, cxxxix, 383.

nearly all of the patients the symptoms date from birth. In one case the condition was noticed after the sixth month, in three after the tenth month. With a severe, well-marked case of congenital muscular flaccidity the inactivity would certainly be noticed early in infancy by the mother or other women who were interested in the child. With a mild case the lack of power might be attributed to rickets. Hypotonia is always recognized at the age when the child is expected to walk and use its arms. Oppenheim assumes that all cases rest on a congenital basis. This may be true, yet some authors believe that an acute disease may develop or accentuate the symptoms of myatonia.

Some cases were observed first after pneumonia and diarrhea. My case appeared after apparent meningitis. Several authors state that the fetus shows no movement *in utero*. Dunn[6] thinks that there is no reason to believe that the disease is infectious, as the lesions are not focal and single muscles or muscle-groups are not affected.

The disease might be due to a toxic agent acting in muscle fibers or terminal nerves. Oppenheim holds that the disease is not in the nervous centers, but is simply delayed muscular development. Baudouin[7] considers myatonia a faulty development or degeneration of peripheral nerves, from infection or auto-intoxication of the thymus, but the influence of the internal secretions of the thymus gland is poorly understood and this gland in health shows enormous variations in size and structure.

MORBID ANATOMY

Six autopsies are recorded and there is much variance in the findings. In one there was degeneration of the anterior horn cells of the cord. In some the cord was normal. The muscles showed imperfect development, great diminution in size in certain fibers and great enlargement in others.

DIAGNOSIS

Myatonia is easily recognized if one is familiar with the description of the disease. The condition should be sharply distinguished from the inactivity of idiocy. In myatonia the intellect is not disturbed. The pseudo-paralysis of rickets would be diagnosed by changes in the bones and cartilages. In poliomyelitis there are permanent localized palsies, muscular atrophy and the reaction of degeneration. The paralytic sequelæ of encephalitis and meningitis are of a spastic character. The course of the disease tending to improve, would exclude muscular dystrophies.

PROGNOSIS

In general the outlook is for a betterment, but not for a complete restoration of muscular strength. Many of the cases were in babies observed only for a short time.

Dunn says that without actual destruction of nerve cells there may be capacity for regeneration. The few reported cases of over five years of age showed varying degrees of improvement, but no complete recovery.

Oppenheim himself thinks that the prospect of regaining muscular power is very good.

TREATMENT

There is no dissent from the opinion that the myatonia should be vigorously treated and that correct therapy is useful.

Strychnin should be given. Electricity, massage and resistive exercises should be used. Individual instruction, by playing with the patient, coaxing the child to reach for things, to stand and to move its legs, is very effective.

CONCLUSION

Griffith,[8] in 1910, found forty-nine cases of myatonia on record. Dunn, in 1911, quotes thirty cases. Both authors evidently consulted the same bibliography.

There is reason to suppose that this infantile muscular weakness, Oppenheim's myatonia, is not uncommon, and that as the symptoms become known to the profession, numerous cases will be found.

REPORT OF CASE

History.—L. O. presented a condition of flaccid paraplegia at the age of 2 years and 9 months. The parents were non-alcoholic, with seven living children and one dead. An older brother had convulsions in infancy, was puny and mentally backward. The patient was the fifth child, born after a normal labor, and was nursed. At the age of 2 months he lay for a week feverish, unconscious, with his head retracted; no convulsions. The legs were completely anesthetic; could be roughly handled without discomfort. After a week all symptoms subsided except that the legs were very tender. This hypersensibility lasted for three weeks and then disappeared. After this the baby throve except that the legs were weak. At 2 years he was able to feed himself and sit erect with his feet crossed beneath him. His lower extremities seemed completely paralyzed, except that he could cross his legs. He would creep by pulling himself along by his arms, dragging his legs behind him. At 2½ years he was severely ill with whooping cough. At the age of 2 years and 9 months he was received into the Buffalo General Hospital, in November, 1910. The child was pale, underweight, was of pleasant, amiable disposition; mentally backward; could say only a few words; was nervous and easily frightened. Nevertheless, he recognized his family, the doctors and nurses, was eager for his food and interested in the talk and play of the children in the ward. His digestion was good; he was apt to wet his clothes and bed. There was no sign of rickets. He had his full complement of teeth.

Examination.—He habitually sat crossed-legged in bed, showing a marked kyphosis due to muscular weakness. Sensation was everywhere perfect.

The upper extremities were fairly strong. The hands trembled when they were used, but he could reach for objects with his hands, feed himself and play with toys. Save for the crossing of the legs, there was no attempt to move the lower extremities. The child made no effort to walk. If he were placed on his feet the knees would double up and he would sink to the floor. In fact, he gave the impression of suffering from a flaccid paraplegia. The muscles of the gluteal region, thighs and legs were soft and flabby, but not atrophied. On carefully examining the legs it became evident that there was no absolute loss of power in any muscle of the lower extremities. By electrical or painful stimulation every muscle in the hips, upper and lower legs and feet could be made to move. The muscular contractions were slow and feeble, but always occurred with perfect coordination. He gave the impression that he was too lazy to move his legs unless he was forced to.

All the leg muscles reacted to faradic and galvanic electrical stimulation; the contraction of the adductors of the thighs was rather sluggish. The abdominal, cremasteric and plantar reflexes were present; the knee-jerks were absent; Babinski present; Kernig absent. The joints were hypermobile; the toes could be moved up and down; the knees twisted laterally; the feet could be placed behind the back, into the mouth and behind the head. Either lower extremity could be swung about like a flail.

Diagnosis.—As I was not familiar with Oppenheim's article on myatonia, I was much puzzled as to diagnosis. The weakness of the legs was not due to idiocy or rickets; the lost reflexes and flaccidity excluded a paresis due to polioencephalitis, meningitis or myelitis. Infantile paralysis could be

6. Am. Jour. Dis. Child., 1911, ii, 340.
7. Semaine méd., 1907, xxvii, 241.
8. Tr. Am. Pediat. Soc., 1910, p. 184.

excluded by the movements of all the muscles under painful stimulation, by electrical irritability, and by the absence of muscular atrophy and of retardation in growth.

After reading articles on myatonia by Griffith[2] and by Dunn,[2] it seemed clear to me that the condition of flaccid weakness of the lower extremities was due to Oppenheim's newly described disease called myatonia, probably developed or accentuated by the illness during infancy.

Treatment.—The child was given strychnin, faradism, massage and resistive exercises. This latter treatment by educative movements proved the most effective of all. At first the child made small progress beyond gaining weight and learning a few words.

In August, 1911, after eight months' treatment, he began to gain strength in his legs. After using a walking chair he began to stand and use his legs and feet. In September, 1911, he was found to be flat-footed and was fitted with appropriate shoes.

By the middle of November he could walk 20 feet alone, could pick up things from the floor and only fell occasionally. About Christmas, he could keep on his feet all day except for the noon rest. He now walks in a waddling fashion with toes turned out, showing that the gluteal and tibial muscles are still weak. The left leg is not so strong as the right. In sitting he assumes a crossed-legged position, and has a marked postural curve in the back. The knee-jerks are absent; the leg muscles are fat and firm. The joints are still hypermobile.

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SUPERNUMERARY AXILLARY MAMMARY GLANDS

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Patient.—Mrs. D., aged 22, primipara, gave birth to a normal robust child in January, 1912. Her puerperium presented nothing unusual until the fourth day, when she complained of swelling and pain in each axilla. At this time, because of the pain, she lay in bed with her arms extended at right angles to her body.

Examination.—There was found in each axilla a tumor as large as a half orange, the base 3 inches in diameter, and the elevation 1½ inches. The right tumor was covered by hair at its upper edge only, while the entire upper half of the left tumor was so covered. The skin over both tumors was entirely normal, not reddened, although quite tense. The tumors were bounded behind by the latissimus dorsi, in front by the pectoralis major, were separated from the normal breast by a distance of 1 inch, and were freely movable on the underlying tissue. At the center of the dome of each tumor there was a darkened area, ½ inch in diameter, from the center of which there projected a small nipple ⅛ inch in diameter and the same in height. On slight pressure over the tumors, a milk-like fluid escaped from both nipples. On the application of a breast-pump milk squirted from each nipple in four distinct streams. There could be no question as to the nature of these tumors. A sensation of fulness and discomfort was experienced in these axillary milk-glands but milk did not flow when the child nursed the normal breasts.

Course.—The axillary milk-glands increased in size until the sixth day of the puerperium, after which time their volume diminished until the fourteenth day, when there remained only the areola and the nipple to indicate their position.

Cases of this kind are rare; in the available literature there appears no case so beautifully symmetrical as this one, and but eight cases in which supernumerary axillary mammary glands were provided with nipples, although there are about a half dozen other cases in which a milk-like fluid exuded through an apparently normal skin on pressure, and a number of others from which a milk-like fluid was obtained on puncture with a hypodermic needle. While there has been some question as to the real nature of the nippleless milk-exuding axillary glands, of which some thirty appear in the literature, there is no possible question as to the nature of the case here reported. The patient was seen in consultation by Dr. William Rendleman, Davenport, Ia.

Knaebel[1] and Kayser[2] present the best recent reviews of the available literature on this subject.

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LACTATION FROM THE MAMMARY GLAND IN THE MALE

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Patient.—A man of Russian descent, aged 24, single, fireman, appearing very muscular and robust, came to me for the first time, complaining of pain in the mammary glands, and a milk-like secretion oozing from the nipples. He informed me that during and after his laboring hours, the glands became more painful and the secretions increased to such a degree

that it saturated his clothing covering the nipples. The patient is in the habit of manipulating and massaging his left gland during his idle time; this, in my opinion, has been a great factor in developing the organ if any tendency to lactation previously existed. This pain or general soreness has been present at varying intervals during the last two years, but no secretive function existed until eight weeks before examination. The latter process has been increasing but slowly.

Examination.—I noted that the left gland was materially larger than the right; the nipple was pouting; there was but a very small amount of pigment deposited within the near area of the nipple; there were, however, a number of shot-like nodules within the skin tissue, simulating Montgomery nodules in the female gland. There was no erosion or thickening of epithelial tissue, no tumors palpable, and no signs of any inflammatory process within or about the gland. The temperature, pulse and respiration were normal. Under the objective fat globules are sparsely distributed throughout the film of fluid; no pus-cells or erythrocytes present.

1. Knaebel, A.: Kasuistischer Beitrag zur Frage der Genese der Mammæ accessoriæ und der sogenannte Achselhohlenbrüste ohne Warze und Ausführungsgang bei Wöchnerlinnen, Monatschr. f. Geburtsh. u. Gynäk., Berl., 1910, xxxi, 547.
2. Kayser, F.: Achselhohlenbrüste bei Wöchnerinnen, Arch. f. Gynäk., Berl., 1908, lxxxv, 459.

Treatment.—Internally, the administration of fluidextract belladonna root to full physiologic effects, and externally to the glands, the application of belladonna ointment, morning and evening, were quite successful in checking the secretion completely and relieving the patient of the pain throughout the glands.

X-RAY FINDINGS IN THE DIFFERENTIAL DIAGNOSIS OF EARLY AND LATE PREGNANCIES

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WITH DISCUSSIONS BY DRS. J. B. MURPHY AND J. B. DE LEE

X-ray skiagraphs for the differential diagnosis of pregnancy have been attempted for some time by radiologists, both in America and abroad, but with only partial success. Many radiologists have shown on plates only indistinct opaque shadows without detail, making it difficult to obtain any clear conception of the position of the fetus.

The technic I have developed not only shows clearly the fetus in the uterus, but is capable of showing many abnormalities. The first case was referred to me by Dr. J. B. Murphy, a breech presentation which has distinct pathologic conditions and which will be described by him in detail. I have since then made over 150 exposures, and find that there is not the slightest danger to mother or child.

The position of the fetus can be clearly determined from the fourth month. The obstetricians to whom the plates have been shown think the method of great value. The exposure is less than one-fifth of a second with a medium tube. The technic is difficult to describe fully in print, as conditions vary considerably with every subject, length of term, etc.

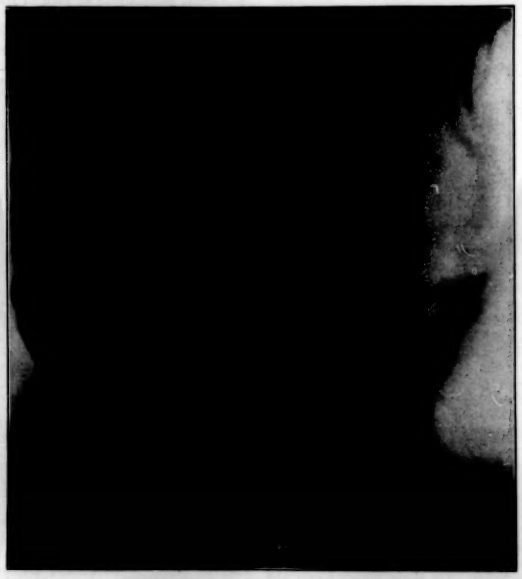

Fig. 1.—Radiograph (slightly retouched) in the case described by Dr. Murphy. Ankylosis of elbow diagnosed in utero. Seven and one-half months.

THE DIAGNOSTIC VIEWPOINT, BY DR. MURPHY

Patient.—Mrs. S. F. W., American, aged 35; married twelve years. Five pregnancies; three children, all living; two abortions; no complications. First two births forceps deliveries, uneventful. Family history, negative; no tuberculosis; urinalysis, negative. Diseases of childhood, with good recovery. In sanitarium for nervous trouble, April, 1907, and April, 1910, one month each time. Menstruation began at 14 years of age, irregular up to twelve years ago, regular since then, every twenty-eight days, duration three or four days; amount, two napkins daily. No change in duration or amount. Pain begins with the flow, lasts twenty-four hours. Never passed blood-clots. No leukorrhea. Last period, December, 1910.

History.—December, 1910, patient failed to menstruate. She felt well, except that she was very nervous. Beginning Jan. 15, 1911, she had a chilly sensation every afternoon between 5 and 6, but no fever; she would generally vomit at 6 p. m. This lasted three months. Two months before the time of examination, patient had occasional attacks of pain in the right iliac region, dull, aching, which would last just a short time; then her abdomen began to enlarge in the left hypochondriac and umbilical regions; since then it had not enlarged very much. There was tenderness over this area; no pain or distress after eating. The bowels were regular. The last eight months there had been an increase in the frequency of urination (two or three times more frequent than formerly). There had been no loss in weight. About seventeen days before examination, the patient's ankles were swollen for eight days and during these eight days her bowels did not move as well as previously. She never had a diarrhea. At 5:15 p. m. temperature was 99.4; pulse, 94; respiration, 20.

Examination. — The abdomen was enlarged to about the size of an eight-months pregnancy. A distinct, irregular, non-angular mass could be felt just above the symphysis and a hard, round, firm mass could be felt under the right costal arch. Under the left costal arch, a point at which the patient had had frequent attacks of pain, was a sharp, projecting mass. It was not more than an inch or an inch and a half in diameter, could not be displaced to the right and could not be brought closer to the hard mass under the right costal arch (the fetal head). The uterine wall was so thin that the form of the fetus could be fairly well outlined. In fact, it was questionable whether it was a uterine or an abdominal pregnancy, as the uterus did not contract under the manipulation of the examination but remained flabby and soft. The bones of the fetal pelvis could be felt through the walls of the uterus by a vaginal examination.

Skiagram.—The perplexing part to me, after the examination, was why the foot or hand remained so far from the head or face and why it could not be displaced into some other position or brought closer to the chest. To clarify this, I conceived the idea of having a skiagram made, and sent the patient at once to Dr. O'Donnell. This was the first time the idea of making a skiagram of the fetus *in utero* had been suggested to him. He readily consented and succeeded in making a splendid skiagram (Fig. 1). A careful examination of this skiagram shows that the right arm is held in a straight position and that there is no articulation perceptible at the right elbow-joint and no even clean-cut one at the left.

The position of the fetus is so perfectly outlined in the skiagram that it needs no description.

Later History.—The patient returned home to await confinement, which occurred Saturday, Oct. 14, 1911. She was attended by Dr. L. J. Frederick of Joliet. It was a breech presentation; delivery occurred without forceps and was very speedy. The child did not suffer from strangulation. The cord was found twisted around the neck but the physicians did not note whether it was also around the arm. The arms were not drawn down in the delivery, but were permitted to rest along the head and came through the straits with the head. This was fortunate, for if the physician had endeavored to deliver the arms before the head he would have had to fracture them.

Fig. 2.—Radiograph (slightly retouched) of five months' fetus in utero.

Fig. 3.—Radiograph (slightly retouched) of six months' fetus in utero.

Fig. 4.—Radiograph of seven months' fetus in utero. This illustration is made direct from the photographic print without retouching. It is shown for comparison with the retouched pictures.

Fig. 5.—Same as Figure 4, slightly retouched.

Child.—I was in that city the day after the delivery and through the courtesy of Dr. Frederick had an opportunity to examine the baby. The following conditions were noted:

Both arms rested motionless at the baby's side and in the extended position. The right arm could not be abducted from the body more than 45 or 50 degrees. The right elbow was stiff, not, however, in bony ankylosis but apparently a fibrous ankylosis. There was rotation at the right elbow-joint. Reflexes were entirely absent. There was a constriction in the soft parts of the arm, at the lower axillary margin, completely encircling it. There was no evidence of pain on irritation of the skin, and not the slightest reflex. This showed that the lesion was a peripheral nerve lesion and not a spinal cord or cerebral lesion. The left arm could be extended almost to right angles with the body. The left elbow could be flexed only to a little less than right angles. There was an absence of all reflexes from irritation of the hands, fingers and palms. The child made no voluntary motion of the fingers, wrists, arms, or forearms, nor did she endeavor to use the deltoids in abducting the arms out from the body. The position of the hand in the skiagram, as observed before the delivery, in the radiograph, which showed it so far in advance of the forehead, is accounted for by the fibro-cartilaginous ankylosed condition of the right elbow-joint; the left hand was held in its position owing to the partial fixation of the left elbow. All of the muscles and fatty structures of both arms were atrophied. The atrophy was, however, more marked in the right than the left arm. The neck was comparatively small but there was no crease in it to indicate that the cord cut into it deeply. The small, constricting, depressed crease just below the axilla on the right arm was also present on the left, but not to such a marked degree. The question is whether or not these constrictions were due to amniotic bands; but that would not explain the fact that the shoulder-muscles were paralyzed. Both legs were movable; both responded in a reflex way; it was impossible to straighten them beyond 120 degrees from the body; they could not be flexed to the side of the abdomen, both being somewhat fixed at the hip. I could not make out that the hips were luxated, although it appeared to me that they might be. As the examination was made in a cool room and under unfavorable circumstances for continued exposure, it was limited.

The question arises, are the paralysis and failure of development of the upper extremities due to a constriction of the brachial plexus in the neck by the cord, or to the amniotic bands just below the axillary margin? If to the latter, why are the shoulder muscles paralyzed? The arrest in development must have taken place early, as the elbow-joint failed to undergo the embryologic separation of the cartilage. It is well known that the bones of the extremities are first connected by a continuous fibrocartilaginous mass with no joint surfaces intervening. Finally there is a central splitting of this cartilaginous mass. The split separates to the periphery and around to the general conformation of the joint, until the joint is fully formed. The arrest in development occurred here before the splitting had taken place, which is completed in these joints at about the fourth to the sixth month of gestation.

Since this case was submitted to Dr. O'Donnell he has made many splendid skiagrams that I have had opportunities to examine. I feel that we can get considerable embryologic information from a careful study of these pictures, and I trust that he will pursue this line of investigation further.

THE USES OF THE X-RAY IN OBSTETRICS.

BY DR. DE LEE

The *x*-ray has proved itself almost useless in the diagnosis of the size and shape of the female pelvis, with a view of determining the possibility of mechanical difficulties during labor. It is possible by its means to recognize gross deformities, distortions, and also narrowing of the pelvic outlet, but the usefulness of the results is not so great as we would wish.

The location of the larger portion of the lumen of the pelvis can be determined by the *x*-ray, and thus might be of help in the question, on which side of the pelvis the large occiput of the head should be brought down for delivery. By means of the *x*-ray, it is possible to discover a rupture of the pubic joint, and also to study the healing processes after pubiotomy. In the differential diagnosis between rupture of the pubis and neuritis, the *x*-ray might be valuable. Softening and relaxation of the pelvic joints could also be discovered by the *x*-ray, and thus serve in the differential between polyneuritis, paraplegia and pelvic bone disease. Kyphotic and assimilation pelves could be discovered, and thus many unsuspected causes of dystocia be explained.

In the diagnosis of pregnancy the *x*-ray will have a very limited field, because the cases are rare in which pregnancy could not be determined with the usual methods, by the time the *x*-ray is able to discover it. In fat women, or in cases in which the differential lies between pregnancy and large fibroid tumor of the uterus, the *x*-ray will be helpful. In cases of illegitimate pregnancy, where an abdominal examination is not permitted, or could not be suggested, the *x*-ray might discover the fetus. Extra-uterine pregnancy could not be diagnosed as such, but a lithopedion could be discovered, although it would be impossible to say that it was not a calcified fibroid.

The differential diagnosis between a normal pregnancy and hydatid mole, after the fifth month, could possibly be made by the *x*-ray. Twins should be easily discoverable after the sixth month. It might also be possible to diagnose gross fetal deformities, such as hydrocephalus and anencephalus, double monsters; and it is barely possible that an *x*-ray picture will become a necessity before every cesarean section, the object being to certify that the child is well formed.

The *x*-ray may be valuable in early infancy. By its means hyperossification, due to prolonged pregnancy, could be determined. As a means of estimating the intra-uterine age of a premature fetus, for medicolegal purposes, in the question of illegitimacy, the *x*-ray is useless, because I have found that ossification in the different bones during gestation proceeds with varying regularity. Injuries to the fetus are easily determined by the *x*-ray, such as fracture of the extremities and fracture of the skull. It may perhaps be possible to find a hemorrhage in the brain by this means.

Never before, to my knowledge, has it been possible so clearly to portray the fetus in utero by means of the *x*-ray, and Dr. O'Donnell's work in this department of investigation deserves general recognition. Altogether, since modern improvements in the technic have rendered the use of the *x*-ray safe, to both mother and child, one can recommend its wider employment.

Prevalence of Bladder Calculi in Java.—The last issue of *Janus* contains an illustrated article by D. van Twist, a medical missionary in Java, who states that during the four years ending in 1909, 461 patients applied for relief from pain during micturition and 450 of them were found to have concrements in the bladder or urethra. Among the 335 patients operated on by suprapubic incision, 244 were children under 15, the majority under 6. In one case 1,500 para-urethral calculi were found, in another, 1,236 preputial calculi. The squatting position assumed by Mohammedans in micturition, preventing complete evacuation of the bladder, is responsible to some extent for the lithiasis, and also the manipulations with phimosis, causing clots, which obstruct the flow of urine.

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X-RAY DIAGNOSIS OF PREGNANCY

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DETROIT

The following case illustrates the aid which the Roentgen ray may afford in the differential diagnosis between pregnancy and fibromyoma of the uterus:

Mrs. B., aged 33, was admitted to Harper Hospital Nov. 7, 1911. Since the age of 11, she has been the subject of convulsive attacks, probably of hysterical origin, from which she is aroused with difficulty. She is the mother of three children, all of whom were delivered normally and are well at the present time. Twelve months before her admission to the hospital her menstruation ceased and has not been present since that time. Following the stoppage of her menses there has been a gradual enlargement of the abdomen which on palpation was found to be uterine.

Previous to her admission to the hospital, she had been examined by several physicians who were unable to make a positive diagnosis of pregnancy. There was no history of nausea or vomiting. The breasts showed no enlargement or pigmentary signs. The patient was very fleshy, her weight being about 250 pounds. The abdominal walls were very thick and quite relaxed. External manual examination failed to reveal anything which could be suggestive of a fetal body. Careful stethoscopic examination did not reveal the fetal heart-beat. Vaginal examination showed a slight softening of the uterine os. No ballottement could be elicited.

The differential diagnosis lay between large fibromyomata of the uterus and pregnancy. Accordingly the day following her admission, two *x*-ray exposures were made, each of four seconds, and the Roentgen rays were directed laterally by means of a large cone-shaped diaphragm through the pendulous abdomen. Both plates distinctly showed the spine, the thoracic cage, and the legs and arms of a well-ossified fetus. The fetal head could not be distinguished. Accordingly from the examination of the *x*-ray plates, a diagnosis was made of pregnancy with the fetal head in the pelvis. On December 15 the patient was delivered of a normal baby girl by forceps, the position being right occipitoposterior. The mother and child both did well and left the hospital on Dec. 24, 1911.

In a paper read before the Michigan State Society, September, 1911, one of us (Dr. Hickey) suggested the value of the Roentgen ray in differential diagnosis between fibroid of the uterus and pregnancy. This case illustrates the ease with which such a diagnosis can be made and shows how the element of uncertainty can be eliminated in many cases in which the thickness of the abdominal walls and the obesity of the patient make the ordinary manual examinations difficult.

If the exposures are short and made with an exact technic, they should not be attended with any danger to the mother or to the fetus. Roentgenologists have for some time been somewhat diffident about making these examinations owing to the fear of injury to fetal life. The improved technic, notably with the recently improved intensifying screens, in which exposures last practically only one or two seconds, however, should do away with any such fear.

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Biology and Medicine.—In ancient civilizations and even down to modern times, the one great stimulus to the growth of biological knowledge lay in the healing art. In ancient and medieval times almost all the contributors to biological knowledge, with the possible exception of Aristotle, were physicians, though it is doubtful if an exception should be made of a man who kept a pharmacy shop. At the Alexandrian museum the subjects of natural history and anatomy were carried on by the faculty of medicine, one of the four faculties originally established at the museum.—Bushee in *Popular Science Monthly.*

MALT SOUP IN NUTRITIONAL DISTURBANCES OF INFANTS

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Malt soup has been highly lauded in Germany for years as a remedy for babies with gastro-intestinal disturbances. Its use in this country has extended quite rapidly during the past few years among pediatricians. Koplik[1] has had very gratifying results with Liebig's formula as modified by Keller. I believe that his writings have been responsible for popularizing in America the use of this food for sick babies.

METHOD OF PREPARATION

Keller's[2] malt soup is prepared as follows: Two ounces of wheat flour are mixed with 11 ounces of whole milk and then passed through a sieve. In a second vessel 3 ounces of extract of malt are mixed with 20 ounces of warm water. The two mixtures are then poured into a porcelain vessel, 2½ drams of 11 per cent. carbonate of potassium added, and the whole cooked with constant stirring for twenty minutes and then brought to a momentary boil; any loss through heat is made up by the addition of boiled water.

This mixture has a formula of fat 1.20, protein 2.00, carbohydrates 12.00, and has a caloric value of 800 to the liter. The above is designed for babies with a bodyweight of from 6½ to 10 pounds from the third to the ninth month. For babies under 3 months old the flour is reduced to 1 ounce and the malt-extract to 2 ounces. It must be kept on ice and warmed before being fed. It has a sweet pleasant taste and is taken greedily by all infants.

According to Keller and Czerny, there is a strict and definite indication for the employment of this food: if this is fulfilled, recovery follows with almost absolute certainty.

MILK NUTRITIONAL DISORDER

Milch-Nährschaden (milk nutritional disorder, Czerny and Keller) is a definite clinical syndrome often met with in this country, and should be recognized by every one caring for children. For years this clinical picture has been misinterpreted; and to these authors belong much credit for giving us a sharp and precise description of the condition and a therapy which is very often successful.

The symptoms develop gradually and in the beginning receive little attention from the mother. If the baby is weighed regularly it will be noticed that the weight-curve becomes very irregular; for two or three weeks there may be no gain at all, at most a very slight gain. This occurs in spite of the fact that the caloric value of the food is sufficient to cause an increase in the weight. In an endeavor to force the baby to gain, the mother increases the amount or the strength of the food which causes a loss of weight (the paradoxical reaction of Finkelstein). The baby becomes pale and the skin loses its elasticity; the muscles become soft and flabby. Restlessness, peevishness and inability to sleep are prominent symptoms. From the actions of the infant the mother is positive the baby is not receiving enough food. Distention of the abdomen is frequently present; vomiting is sometimes met with. The stools show characteristic

1. Koplik: Diseases of Infancy and Childhood, 1906, p. 150.
2. Des Kindes Ernährung, Ernährungsstörung und Ernährungs Therapie, 1909; Franz Deuticke, Leipsic and Vienna.

changes; they assume a gray to white color, are very dry and do not soil the napkin; they frequently emit a foul odor. The friableness of the stool is due to the fact that it contains very little water; this is because it is composed mostly of insoluble soaps, as proved by chemical examination, and cannot take up water. The reaction of the stool is markedly alkaline. The above-described stool may be displaced by a loose watery acid stool in the presence of a complicating dyspepsia or intestinal infection. If the proper treatment is not instituted many of these cases go over into marasmus (decomposition).

NATURE OF THE DISTURBANCE

This is a severe metabolic disturbance in which the entire organism of the infant is concerned. The element of the food which brings about the condition is the fat which has been present in the food in a high percentage, or only in a moderate one, but still relatively high for that particular baby. Bacteria have nothing to do with the condition. Owing to the fact that top mixtures have

The infant seen on the left side was suffering from balance disturbance; aged 9 months; weight 9 pounds, 15 ounces. The infant on the right side, in the stage of decomposition, was aged 8 months; weight 6 pounds, 10 ounces.

been quite popular the past several years, this clinical picture is frequently seen. The therapeutic test at once places the blame on the fat. Increase of fat in the food causes the condition of the baby to become worse and causes an increased formation of soap in the stools. Increase of proteids brings about no change. Diminution of the fat percentage, with an increase of the carbohydrates, causes an improvement in the condition of the baby with a disappearance of the soap-stools.

This condition is described by Finkelstein, under the caption "balance disturbance" (*Bilanz-Störung*). While Czerny and Keller believe that the fats themselves are the cause of the fat-soap stools, Finkelstein holds that their formation is due to a loss of salt balance, and he is of the opinion that an excess of fatty acids has been combined with calcium and magnesiums[3] with a result that there is formed a much larger amount of insoluble calcium and magnesium soaps than is encountered under normal conditions. An important observation of the Czerny school is the presence of an acidosis and an increase of the ammonia coefficient in the urine. Treatment with alkalies directed to overcome this acidosis does not benefit the baby unless the cause of the condition is removed. It will be noticed that carbonate of potassium is incorporated in the malt soup mixture with the view of neutralizing this acid intoxication.

3. Meyer: Ernährungsstörungen und Salzstoffwechsel beim Säugling. Ergeb. d. Inn. Med. Kinderh., I.

RESULTS WITH MALT SOUP

I have used malt soup extensively for the past five years and have found it especially valuable in infants showing the above-described picture. If over 3 months of age they respond almost invariably to this therapy. The abnormal appetite is appeased, the restlessness is quieted and the infant becomes much happier. The soap-stools rapidly clear up and take a soft, moist, mahogany-brown, salve-like consistency. The body-weight starts upward, the gain averaging usually from 4 to 7 ounces a week. Too rapid gain in weight such as a pound a week is, in my experience, undesirable and is usually followed by a relapse. It is indicative of overfeeding with carbohydrates and should be met by a reduction in the amount of flour and malt extract. For a favorable result it is necessary that the baby possess a high carbohydrate tolerance. As a matter of fact, the babies with this disturbance usually show an exaggerated tolerance for starches and sugars. I frequently modify the original formula of Keller. Since the curative properties of casein have been demonstrated I frequently have the mixture made up with 20 ounces of skim-milk. Instead of wheat flour, I believe at times I have had better results with a dextrinized flour; the amount may be varied from one-half to two and one-half ounces, depending on the individual case. The amount of the malt-extract in the mixture may be with advantage altered, depending on the presence or absence of constipation, and a failure to gain in weight. After improvement has begun it is well gradually to raise the percentage of fat in the mixture, remembering that while it was the cause of the metabolic disturbance, it is not well to eliminate it from the diet over too protracted a period. Fat has twice the food value of protein or sugar and is desirable in the diet as soon as it can be tolerated. I have frequently prescribed this food when vomiting was an associated symptom. Stomach lavage was also employed and the mixture made up with skim-milk.

In feeding malt soup to these patients I believe it is of essential importance to leave out the fat for a time. Cannon[4] has proved that feeding a high percentage of fat inhibits the secretion of hydrochloric acid and that the cardiac sphincter remains open as long as the reaction of the cardia is alkaline. When a small amount of fat is fed the normal amount of hydrochloric acid is again secreted, the entrance of the stomach closes and the outlet opens at the proper time.

Even if the condition of the baby has progressed to the state of marasmus, the outcome under malt soup is frequently favorable. This food should be continued only for two or three months, at which time the following formula is indicated: Fat 2 to 3; proteid 2 to 2½; maltose and dextrin sufficient to make the total carbohydrate 7. On the malt-soup diet, with its high carbohydrate percentage, the organism is forced to gain, much as a florist forces his plants in a hot-house. Hence the necessity of changing off to some other diet after a certain length of time. Any disadvantage which may arise from using a cooked food may be overcome by the daily administration of a small amount of orange juice.

4. Quoted by Talbot: Am. Jour. Dis. Child., 1911, i, 176.

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This food is not adapted to infants under 3 months. I have been successful in a few instances, but usually the results are disappointing. The bowels become loose and sour-smelling and the infant grows very restless; symptoms due to the carbohydrate content of the food. Albumin milk is much more likely to be of service for these babies.

In diarrheas this food is frequently of inestimable value; without any other medication the stools frequently become formed and the weight is rapidly brought back to normal. It may be prescribed as early as the third or fourth day, even in the presence of a marked diarrhea. I believe that the chief explanation for the favorable results[5] in this condition is the fact that the maltose, unlike the lactose, shows little tendency to ferment in the bowels. Lactase, the ferment which converts the lactose into its monosaccharid, is found exclusively in the intestinal tract; while maltase, which acts on the maltose, occurs not only in the intestine, but in other parts of the body, particularly the blood. Thus any of the maltose which may possibly pass through the intestinal wall may still be converted into its monosaccharid. This is thought to be the reason for the fact that the power of assimilation of the body is much greater for maltose than for the other sugars.

It must be distinctly borne in mind that some infants after malt soup administration develop dangerous symptoms of intoxication, owing to the high percentage of soluble carbohydrates. That high fever and convulsions may follow the use of this food is illustrated by the following case:

Patient.—Baby M., 6 months old, fed artificially from birth as mother had no milk. Top milk mixtures were employed for several weeks; infant did not thrive. Condensed milk and various proprietary foods tried with unsatisfactory results. When I first saw the baby, diarrhea had existed for three weeks. The general condition was very poor; continuation of the downward progress meant that the typical picture of marasmus was but a short time off.

Treatment and Course.—Malt soup was prescribed, made up with 10 ounces of skim-milk, 1 ounce flour, and 1 ounce malt-extract. There was an immediate and rapid improvement which extended over a period of four weeks. The stools became formed, restlessness ceased and the body-weight started upward, amounting during this period to 20 ounces. In the fifth and sixth week after the commencement of the malt-soup diet the weight was stationary; the malt-extract was increased to 1½ ounces. The baby responded with a fever of 105 F. and convulsions which continued three hours, necessitating the use of morphin hypodermatically. Physical examination excluded organic lesion of any of the internal organs. The presence of rapid, deep, pauseless respiration, with the history, pointed to the diagnosis of alimentary intoxication (Finkelstein).[6] All food was withheld for eighteen hours and water administered freely. Breast-milk feeding was begun first in very small amounts, gradually increased with improvement of the baby. The further course toward recovery was uneventful.

Such babies should have a rectal temperature taken regularly twice a day. Any rise of temperature should call for an immediate examination of the urine for sugar so as to forestall the development of severe symptoms. The phenylhydrazin test is the best.[7] These symptoms, even if of the severest grade, immediately subside on withdrawing the carbohydrates. The great danger is that the clinician will misinterpret the symptoms and continue with the sugars in the diet.

5. Leopold: Arch. Pediat., 1911, xxviii, 345.
6. Jahrb. f. Kinderh., January, 1907, p. 1.
7. In a test-tube put 1 gm. of phenylhydrazin hydrochlorid, an equal quantity of powdered sodium acetate and enough of the suspected fluid to half fill the tube. The acetate dissolves as the tube is heated. Boil for two minutes and after twenty minutes examine, under the microscope, for the characteristic osazone crystals. (Holland: Medical Chemistry and Toxicology, 1911.)

CONCLUSIONS

1. Milk nutritional disorder (Keller-Czerny) is a definite clinical condition occurring subsequently to the administration of fat of cow's milk.

2. It is frequently cured, particularly after the third month, by Keller's malt soup.

3. Even if the metabolic disturbance has persisted so long that marasmus has developed, malt soup is often of signal service.

4. For these babies to recover on malt soup they must have a high carbohydrate tolerance.

5. Malt soup is frequently a good diet in diarrhea.

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A NEW TEST-MEAL*

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The information to be obtained from an extracted Ewald test-breakfast is necessarily very limited. It is obvious that little is gained as to the motility of the stomach. The actual acidity of the gastric juice, as secreted, cannot be found. No estimate can be made of the total amount of gastric juice produced.

In the hope of obviating some of these deficiencies, Mathieu proposed the addition of a definite quantity of water to the residue in the stomach after the expression of a small sample. After an interval of an hour, he showed that the total residue could be calculated by using a formula based on the difference in acidity of the two abstracted samples before and after the addition of the water. While from this method it is possible to determine the residue of test-meal and gastric secretion it is impossible to say how much of each makes up this residue.

To give further information on these facts, Sahli proposed his butyrometric test-meal. This, it will be recalled, is a fat emulsion made by roasting 45 gm. of flour thoroughly intermixed with 15 gm. of butter. To this mixture 350 c.c. of water are added, and the whole boiled two minutes. Fifty c.c. of this soup are retained for fat determination and 300 c.c. given to the patient. After one hour the stomach contents are aspirated and a definite amount of water is poured into the stomach as in the method of Mathieu. Fat determinations are then made of the soup as given and of the first aspiration of stomach contents.

It soon became apparent to clinicians working with this test-meal that, apart from the time consumed by its preparation, it was unsatisfactory because such a large amount of fat inhibited gastric secretion, and because the instability of the emulsion led to erroneous results.

Friedman,[1] after working with this meal and finding the objections justified, came to the conclusion that a satisfactory modification was to be found in a meal made by diluting condensed milk with water in the proportion

* Read at the annual meeting of the American Gastro-Enterological Association, Philadelphia, April 19, 1911.
1. Friedman: Arch. of Int. Med., 1909, iv, 69.

of one to three. He sums up his excellent presentation of the entire subject as follows:

The method does, however, fail occasionally, probably for the reason that the emulsion is destroyed. Failure is particularly liable to occur under the following circumstances:

1. In cases in which there is low acidity and hypermotility. In such cases there will be so little fluid in the stomach in fifty minutes that no accurate fat determination can be made. When such a condition is suspected, it is best to aspirate in thirty minutes.

2. In cases of gastritis in which there are very large amounts of mucus which destroys the emulsion and by rising to the surface of the Babcock bottles obscures the readings.

3. In cases of greatly impaired motility owing to the difficulty of completely emptying the stomach preliminary to lavage.

Even where it fails it still, however, offers as much information as the ordinary Ewald test-breakfast.

In the hope of finding a test-meal which would afford the desired knowledge, without these possibilities of error or complete failure, I have experimented with various substances to discover one which, when added to the test-meal in definite quantity, would indicate, on its passage from the stomach, at the lapse of an hour, the amount of test-meal which remained. It was finally concluded that lactose had many advantages for this purpose, and during the past few months seventy test-meals of this character have been given. In detail the test-meal is made as follows:

To 300 c.c. of freshly made weak tea 30 gm. of lactose are added. This fills two ordinary tea-cups. It has been found of practical advantage to give at the same time one pilot biscuit or two soda biscuits. Crackers containing salt, sugar or dextrin should not be used. After this test-meal has remained in the patient's stomach for an hour a liberal portion is extracted, and, preferably with the bulb, water, about 200 c.c., but necessarily a definite amount, is forced into the stomach through the tube. The mixing in the stomach is effected by partly withdrawing the contents and forcing them back again several times before the extraction of the second sample. These two samples are then ready for analysis. The free acidity of the first is determined and has been found to be comparable to the free acidity resulting from the Ewald test-breakfast. The total acidity of both specimens is then estimated with great care, using phenolphthalein as an indicator. The residue, after the extraction of the first portion, is determined by means of the Mathieu formula as follows: Let A equal the acidity of the first portion, and B the acidity of the second portion; then $B \times 200 \div (A-B) = X$, i. e., the residue. To find the total stomach contents after the lapse of one hour it is necessary, of course, to add the quantity of the first specimen to the residue as found by the above formula.

The next step is the determination of lactose in the first specimen. Before satisfactory results were obtained many methods of lactose determination were experimented with until, finally, trials were made with the method of Gerard and Allen as modified by Rüdisch and Cellar.[2] This modification of Fehling's solution is made by adding one part, by volume, of the mixed copper and Rochelle salt solution to four parts, by volume, of 50 per cent. aqueous solution of chemically pure potassium sulphocyanate. Twenty-five c.c. of this solution, the equivalent of 5 c.c. of mixed Fehling's solution, are gently boiled in a porcelain dish, and the sugar solution is added drop by drop, preferably from a burette. The end reaction is a quick and sharp loss of color, and when the experiment is done with care many trials with the same specimen give results which show less than 0.1 per cent. variation. In determining the lactose percentage in this solution, the end reaction has been found even more sharp than is the case with a complex fluid such as urine. The presence of acids in the stomach contents has not seemed to alter the results in any way.

It must be remembered in making these estimations that the oxidation of copper by lactose is somewhat slower than with glucose and care must be exercised to add the drops slowly and to titrate during the dropping. It is more convenient to work with filtered chyme that has been diluted three or four times. The number of cubic centimeters of the undiluted chyme necessary to decolorize 50 c.c. of the Rüdisch-Cellar solution having been found, to find the percentage of lactose it is necessary to divide, not 0.05 gm., as is the case for glucose, but 0.06 gm., as lactose has a different power of reduction. Reduced to simple terms it may be said that six divided by the number of cubic centimeters of undiluted chyme necessary to decolorize 50 c.c. of the Rüdisch-Cellar solution gives the percentage of lactose.

Having previously determined the stomach contents at the end of one hour by the Mathieu formula, it is now determined just what portion of this is test-meal and what portion gastric secretion. If 30 gm. of lactose were given to the patient the amount of fluid test-meal remaining would be proportionate to the amount of lactose remaining. The actual amount of lactose is easily determined by multiplying the determined total residue by the determined percentage. Let L equal the number of grams of lactose in the stomach contents, and A the number of cubic centimeters of contents; then the following formula needs no explanation: 300 : A : : 30 : L, 300 being the amount of fluid test-meal ingested. Simplified, this formula will read $10 \times L = X$. The amount of gastric juice in the stomach contents is found by subtracting the discovered test-meal residue from the total residue found by Mathieu's formula.

The following is an example of the result on a normal stomach. First extract 40 c.c. in amount; free acidity was 20, total acidity, 40. One hundred and fifty c.c. of water were injected into the stomach and the second sample showed a total acidity of 8. $B \times 150 \div (A-B) = X$ here became $8 \times 150 \div 32 = 37.5$. The total residue was then 37.5 + 40 or 77.5. The percentage of lactose in this total residue was 0.641 per cent. The total residue, $77.5 \times 0.641 = 3$ gm. of lactose; 300 : 30 : : X : 3, or $X = 10 \times 3$, or 30, the test-meal residue. Then 77.5—30=47 c.c., the actual amount of gastric juice.

From these calculations we now have the total stomach contents one hour after the ingestion of a definite test-meal. We know how much of this is test-meal residue and how much is gastric secretion. Working with these figures secured by the Sahli test-meal and its modifications a number of formulas have been suggested designed to give us quotients which could be used as bases of comparison. Thus, for example, G. J., the gastric juice residue, divided by T. M., the test-meal residue, is said normally to be as .7 is to 1; if the figure deduced in any case is more than 1 we have hypersecretion, and if less than 0.7 we have a quotient of hyposecretion. The motility again is found by dividing 300, less the test-meal residue, by 300. Practically, I doubt that these quotients will be much used, but I am inclined to think that the estimate of the actual acidity

2. Rüdisch and Cellar: The Journal A. M. A., Jan. 26, 1907, p. 324.

of the undiluted gastric juice is a matter of clinical interest. This is determined as follows: Let A equal the acidity of the aspirated stomach contents; let T equal the total stomach contents at the time of aspiration and G. J. equal the amount of gastric juice discovered. Then X, the calculated acidity of the gastric juice not diluted by the test-meal residue, would be as follows: $X=A \times T \div G.\ J.$ Taking as an example the previous case we have:

A=40, T=77.5, G. J.=47. Then X=66.

The advantage of this test-meal over the butyrometric test-meals, previously suggested, are the ease of preparation, the palatability of the meal and the simplicity of the lactose determination. I cannot see that the objections which, Friedman admits, are inherent in the test-meal he proposes are applicable to the test-meal here described; separation of the sugar from the liquid could not conceivably take place. The presence of mucus would have no particular influence on the estimates. In no case have I found the quantity at the end of an hour insufficient for several confirmatory readings.

TABLE SHOWING RESULTS FROM THE USE OF A NEW TEST-MEAL

Case.	Free Acidity.	Total Acidity.	Test-Meal Residue.	Gastric Juice, Residue.	Gastric Condition.
1	22	40	138	92	Ptosis and asthenia.
2	14	31	120	84	Ptosis and asthenia.
3	8	28	216	150	Ptosis and asthenia.
4	16	44	90	60	Ptosis and asthenia.
5	0	8	170	30	Ptosis, asthenia, achylia.
6	0	12	205	95	Ptosis, asthenia, achylia.
7	0	8	63	70	Achylia gastrica.
8	0	20	31	50	Achylia gastrica.
9	44	68	55	224	Peptic ulcer.
10	80	120	15	138	Peptic ulcer.
11	44	65	20	150	Peptic ulcer.
12	36	50	39	131	Peptic ulcer.
13	20	40	18	104	Peptic ulcer.
14	40	63	32	110	Peptic ulcer.
15	20	46	40	70	Normal.
16	19	40	30	47	Normal.
17	26	42	68	84	Marked ptosis, motility good.
18	10	45	65	49	Marked ptosis proved by *x*-ray. Motility good proved by *x*-ray.
19	40	60	28	48	Moderate ptosis.
20	20	40	60	46	Chronic appendicitis; appendix removed. Attacks of pyloro-spasm. Constant dyspeptic complaints.
21	16	56	51	122	Cholelithiasis, occasional colics with constant gastric complaints.
22	30	50	80	95	Cholelithiasis, constant complaints, operation.

Every practitioner should be familiar with quantitative sugar determinations, and the method I have recommended requires no extraordinary equipment nor considerable experience with laboratory technic.

The question suggests itself whether sugar may not be directly absorbed by the stomach and thus lead to erroneous conclusions in using this test-meal. It has been established that the sugar in strong solutions may be directly absorbed from the stomach, and, although at the present time I am not able to say that within the hour none of the lactose is absorbed by the stomach, thus leading to faulty inferences, I am of the opinion, from practical experience, that any such absorption is inconsiderable. I hope to be able to settle this question definitely, but at present can only say that, in the cases in which motility has been obviously affected, the lactose readings have been so high as to justify the belief that but little, if any, absorption from the stomach could have taken place. Even though it may be shown that a certain small proportion of sugar is absorbed from the stomach the method would still be of value in a comparative way.

It is not intended in this preliminary communication to establish figures showing the normal limits of motility and secretion. The comparatively small number of cases studied, seventy in all, is insufficient for conclusive deductions, and only tentative conclusions have thus far been reached.

In the accompanying series of cases the diagnosis of conditions present in the stomach was established by considerable clinical study or shown by surgical exploration.

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THE FREQUENCY OF SURGICAL LESIONS OF THE KIDNEY AND URETER AS ESTIMATED FROM AUTOPSY AND HOSPITAL RECORDS *

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In no special field of surgery has more substantial progress been made during the past ten years than in the surgery of the kidney and ureter. The diagnosis of the surgical lesions of the kidney and ureter by the aid of the cystoscope, the ureteral catheter and the *x*-ray has now become almost an exact science; and with the development of accurate means of diagnosis the operative mortality has fallen and the end-results have at the same time improved until the results obtained compare favorably with those in any other branch of major surgery.

Further progress in this field must come, in part, through a clear conception as to the actual frequency and importance of the several pathologic conditions which go to make up the surgical group of diseases of the kidney and ureter, and the study on which this paper is based was undertaken with the idea of throwing some light on this phase of the subject.

The data which has been collected in this study may be grouped under three headings as follows:

1. Autopsy statistics (Tables 1, 2 and 3).

2. The recognized frequency as found in hospital practice (Table 4).

3. The relative frequency of the different lesions as they are found at operation (Tables 5 and 6).

Surgical diseases affecting the kidney and ureter may be conveniently considered under the following heads:

1. Calculous disease with the stones situated either in the kidneys, ureters or both.

2. Obstructions interfering with the free flow of urine from the kidney to the bladder.

3. Pyogenic infections involving the kidney and ureter.

4. Tuberculosis.

5. Tumor growths.

6. Traumatisms.

The frequency of these conditions as found at autopsy is shown in Tables 1, 2 and 3. In the Bender Laboratory series, comprising 1,652 consecutive autopsies performed by the members of the staff of this institution

* Read before the Rensselaer County Medical Society, Troy, N. Y., Jan. 9, 1912.

previous to August, 1911, I found 106 instances of surgical lesions of the kidney or ureter, a proportion of 1 in 15.5. All of these patients presented surgical lesions of practical diagnostic interest and seventy-four of these, or 1 in 23.3 of the patients coming to autopsy at the Bender Laboratory, presented lesions of the kidney or ureter which, had they been accurately diagnosed during life, would certainly at some time have been considered as definitely calling for surgical treatment. These figures are higher than I had expected to find, but they correspond very closely with those given in Table 3, which I have compiled from Kapsammer's[1] analysis of 20,770 autopsies performed at the Wiener Allgemeine Krankenhaus during the ten years ending with 1902.

Kapsammer, in his series, makes no mention of hydronephrosis and it is probable that most of the cases of hydronephrosis which occurred in the autopsies analyzed by him are included under pyelitis and pyelonephrosis which so frequently complicate hydronephrosis.

Morris,[2] in 6,536 autopsies performed at the Middlesex Hospital, London, from 1873 to 1897, found 381 cases of non-calculous hydronephrosis, a proportion of 1 in 17.2, which is considerably higher than the 1 in 27 found in the Bender Laboratory series. But, in considering the Middlesex Hospital statistics which have been widely quoted in the literature, we must bear in mind the fact that the Middlesex Hospital is the great cancer hospital of London, and that a very large proportion of the patients coming to autopsy at this hospital have died of cancer.

From Tables 1 and 3 we may safely estimate that surgical lesions of the kidney or ureter, of at least practical diagnostic interest, are found in approximately from 4 to 6 per cent. of patients coming to autopsy, and that the great majority of these patients could at some time have been cured or greatly benefited by surgical intervention, had an accurate and timely diagnosis been made.

Of equal importance is the fact that, with very few exceptions, the renal lesion is the chief factor which determines the death of the patient. Thus in ten out of fourteen of the calculous cases in the Bender Laboratory series the patients died as a direct result of the presence of the calculi in the kidney or ureter, and an equally high proportion obtained for all of the other conditions enumerated in Table 1. From a study of the autopsy records one is led directly to the conclusion that not only are surgical lesions of the kidney and ureter of relatively frequent occurrence, but also that they constitute a group of affections which, in the long run, are particularly fatal. Some of them kill quickly, but most of them add the handicap which determines a fatal outcome at a time when the body cannot carry a handicap and win against some intercurrent disease.

A fairly accurate estimate of the frequency of this group of surgical lesions, as recognized clinically, may be obtained from the annual reports of representative hospitals, and Table 4 has been compiled from the 1908, 1909 and 1910 reports of a number of representative American hospitals and from the histories of private cases examined by my associate, Dr. McMullen, and myself.

Out of 69,209 patients treated at ten representative American hospitals during 1908, 1909 and 1910, 762

TABLE 1.—SURGICAL LESIONS OF KIDNEY AND URETER FOUND IN 1,652 AUTOPSIES—BENDER LABORATORY RECORDS

				Proportion
I	Renal or ureteral calculus		14	1 in 118
II	Total hydronephrosis and hydropyonephrosis		61	1 in 27
	(a) Due to benign non-calculous urethral obstructions	21		
	(b) Secondary to enlarged prostate, urethral stricture, vesical stone, etc.	23		
	(c) Secondary to extra urinary malignant growths	13		
	(d) Congenital	4		
III	Fatal cases of pyelitis and pyelonephrosis all accompanied by obstruction and classified under cause of obstruction.			
IV	Tuberculosis and actinomycosis		13	1 in 127
	(a) Tuberculosis of kidney (primary in genito-urinary tract)	12		
	(b) Actinomycosis (limited to kidney and bladder)	1		
V	Malignant renal tumors and cystic kidney		11	
	(a) Malignant tumors primary in kidney	6		
	(b) Bilateral cystic kidney	3		
	(c) Unilateral cystic kidneys (massive cortical retention cysts)	2		
VI	Traumatic injuries of kidney		7	
			106	1 in 15.5 (6.4 per cent.)

TABLE 2.—ADDITIONAL RENAL AND URETERAL ABNORMALITIES FOUND IN 1,652 AUTOPSIES—BENDER LABORATORY RECORDS

Absence of one kidney (congenital aplasia or hypoplasia with ureter impervious)	7
Horse-shoe kidneys	3
Double ureters	9
Terminal renal tuberculosis with extensive renal destruction in cases of pulmonary or generalized tuberculosis	8
Metastatic malignant growths invading kidney	4
Small calculi in infants	4

TABLE 3.—SURGICAL KIDNEY LESIONS FOUND IN 20,770 AUTOPSIES—WIENER ALLGEMEINE KRANKENHAUS, 1893-1902

I	Renal calculus, total cases		73
	Unilateral	51	
	Bilateral	22	
	Not diagnosed	69	
	Diagnosed	4	
II	Hydronephrosis—Figures not reported.		
III	Pyelitis and pyelonephrosis, total cases		550
	Not diagnosed	518	
	Unilateral	118	
	Bilateral	400	
	Correctly diagnosed	23	
	Unilateral diagnosed as bilateral	15	
	Total diagnosed	38	
IV	Tuberculosis of kidney, total cases		191
	Unilateral	67	
	Bilateral	124	
	Diagnosed	6	
Four of the six diagnosed were bilateral cases, the patients dying after an unilateral operation.			
V	Renal tumors, total cases		74
	Unilateral	69	
	Bilateral	5	
	Diagnosed	24	
	Previously operated	12	
	Total kidney operations in hospital during same period		92
	Good operative risks, the patients dying without a diagnosis		304

TABLE 4.—SURGICAL DISEASES OF KIDNEY AND URETER. FREQUENCY OF RECOGNIZED CASES IN RECENT AMERICAN HOSPITAL PRACTICE

	Total Admissions	Surg. Dis. of Kidney and Ureter	Proportion	Per Cent.
General admissions, ten hospitals	69,209	762	1 to 98	1.0
Med., surg., gyn. and g.-u. dispensaries in three hospitals	23,532	45	1 to 523	0.2
Surgical service in seven hospitals not making routine use of cystoscope and *x*-ray	16,529	185	1 to 89	1.1
Surgical service in three hospitals in which routine cystoscopic and *x*-ray examinations are made	25,243	527	1 to 48	2.1
McMullen and Stanton, private cases	5,507	102	1 to 54	1.8

1. Kapsammer: Nieren-Diagnostik und Nieren-Chirurgie, Vienna, 1907.

2. Morris: Surgical Diseases of the Kidney and Ureter, 1901, 1, 404-406.

were diagnosed as having surgical lesions of the kidney or ureter, exclusive of cases diagnosed as movable kidney. This gives a proportion of 1 in 98.2, or 1 per cent. of all patients admitted to these hospitals, which probably represents a fair average as to the frequency of these conditions as recognized by the average standards of diagnosis.

Among 23,532 new patients admitted to the medical, surgical, gynecologic and genito-urinary dispensaries of the University of Pennsylvania, the German hospitals in Philadelphia and the Massachusetts General Hospital in Boston, one finds but forty-five cases, or 1 in 523, diagnosed as belonging to the surgical group of kidney lesions and then usually under some such indefinite diagnosis as renal colic, renal hematuria or pyelitis.

TABLE 5.—OPERATIONS ON KIDNEY AND URETER COMPILED FROM 1909-1910 ANNUAL REPORTS OF THIRTY-FIVE AMERICAN HOSPITALS

	No. Hospitals Reporting Cases	No. Cases
Cystic kidney	3	3
Movable kidney	27	143
Renal calculus	31	146
Ureteral calculus	10	24
Hematuria	1	3
Pyelitis	13	35
Pyonephrosis	27	46
Hydronephrosis	8	20
Intermittent hydronephrosis	1	12
Hydro-ureter	2	2
Tuberculosis of kidney	12	29
Malignant tumors of kidney	2	2
Renal fistula	3	3
Ureteral obstruction	1	1
Total		469

TABLE 6.—OPERATIONS ON KIDNEY AND URETER—ST. MARY'S (MAYO) CLINIC, 1908, 1909 AND 1910

	Admitted	Recovered	Died
Exploration, kidney, negative	10	10	.
Exploration, kidney, double cystic disease	3	2	1
Exploration, kidney, inoperable hypernephroma, 5; sarcoma, 1	6	6	.
Exploration, kidney and ureter, double tuberculosis	6	6	.
Acute anuria, double decapsulation	2	2	.
Nephrectomy for carcinoma, 3; sarcoma, 2; hypernephroma, 21	26	23	3
Nephrectomy for hematoma, 1; traumatic rupture, 1	2	1	1
Nephrectomy for acute parenchymatous nephritis	4	3	1
Nephrectomy for pyelonephritis	4	4	.
Nephrectomy for tuberculosis disease	67	66	1
Nephrectomy for cystic kidney and calculi	1	1	.
Nephrectomy for hydronephrosis, 5; infected hydronephrosis, 17	22	22	.
Nephrectomy for pyonephrosis, with or without stone	59	56	3
Nephrotomy (lesion not stated)	7	7	.
Intermittent hydronephrosis, 21; plastic on pelvis of kidney for intermittent hydronephrosis, 20	41	41	.
Nephrorrhaphy	2	2	.
Nephrolithotomy and pelviotomy for stones	59	59	.
Ureterolithotomy	61	61	.
Nephrectomy for stricture of ureter	1	1	.
Ureterotomy (lesions not stated)	2	2	.
Ureterectomy	7	7	.
Sinus of kidney, drained	1	1	.
Total	393	383	10

This simply shows that in the superficial examination given dispensary patients these lesions, for the most part, go entirely unrecognized unless the symptoms are so palpable as to demand a guess in the direction of the kidney.

Among 16,529 surgical cases treated in seven American hospitals in which the *x*-ray and cystoscope are made use of to only a limited extent, there were 185 operations on the kidney and ureter, or 1 in 89.3. The average of approximately 1 per cent. holds good with a surprising uniformity in each of these hospitals and probably represents approximately the diagnosed incidence of these cases in the hands of surgeons who have recognized diagnostic ability, but who do not make routine use of the cystoscope and *x*-ray in all suspicious cases.

On the other hand, among 25,243 surgical cases treated in three American hospitals in which routine cystoscopic and *x*-ray examinations are made in all suspicious cases, we find 527 operations on the kidney and ureter, or 1 in 47.9, and the proportion of approximately 2 per cent. holds good for each of these hospitals. Since the work done by these hospitals is too varied and extensive for the proportion to be materially altered by any reputation of the surgeons for this particular line of work, the proportion of 1 in 50 probably represents approximately the true incidence of these lesions in operative surgical work.

My associate, Dr. McMullen, and I, in examining 5,507 patients, between Aug. 1, 1907, and Nov. 30, 1911, found 102 cases which we could definitely diagnose as belonging to the surgical group of kidney or ureteral lesions, a proportion of 1 in 54 of all patients seen in consultation by us during this period.

Table 5, which was compiled from the 1909-1910 reports of thirty-five American hospitals, gives us an idea of the relative frequency of the different kidney and ureteral lesions as they are found at operation in ordinary hospital practice, while Table 6 shows the relative frequency of these conditions as they are found at operation in a hospital in which modern diagnostic methods are used in all suspected cases. It is worthy of note that Table 5 shows 143 operations for movable kidney while Table 6 shows only two nephrorrhaphies. The relative frequency of the different lesions as shown in Table 6 corresponds, in a general way, quite closely with the relative frequency of the same conditions as found at autopsy and, as compared with Table 5, shows a decided increase in the frequency of those conditions most often requiring the use of the cystoscope or the *x*-ray for their diagnosis.

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THE DEFINITION OF NORMAL URINE*

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The term "normal urine" has conveyed different meanings as it has been employed by writers in the last fifty years, since more or less exact analyses of the excretion have been available, and even to-day a comparison of the clinical literature, on the one hand, with the special research literature, on the other, would show a very great lack of harmony in the use of the term.

For one class of writers, by no means small, the conception of a normal urine was apparently that of an excretion from healthy individuals consuming a rather large weight of food in nearly constant quantity from day to day; the important products in the excretion were supposed to appear in proportions varying within pretty narrow limits. This old idea grew up at a time when our notions of the protein metabolism were rather obscure, and when foods in general and the proteins in particular were supposed to tarry long in the body before the products of their metabolism were finally excreted.

One of the theories of protein metabolism long current assumed a marked fixation of ingested protein in the living tissues before catabolism was possible, and this fixation would serve as a kind of regulator of the rate of catabolism, and therefore of the following excretion.

* Read before the Biological Section of the American Chemical Society, Washington, D. C., Dec. 28, 1911.

The assumed fairly constant elimination of urea, for example, might be accounted for in this way.

While a multitude of facts speak against this view, as originally presented, and while numerous extended series of urine examinations have shown a close dependence of the excretion on the food but recently consumed, the old idea of a normal, as exemplified by a uniform excretion, still holds in many quarters and even reappears from time to time in our standard text-books and handbooks. For example, this statement is found in the last American edition of Hammarsten's "Physiological Chemistry" (p. 645): "The quantity of urea which is voided in twenty-four hours on a mixed diet is, in a grown man, about 30 gm., in women somewhat less." As it stands this is misleading, but later in the work (p. 732) a table is given which shows that 30 gm. of urea may be expected from a diet corresponding to the old Voit standard of 118 gm. of protein, 56 gm. of fat and 500 gm. of carbohydrate in the daily food. This table, just referred to as quoted by Hammarsten, is given also in the new handbook of Neuberg, and is seen to present the same values. But the paragraph preceding the table reads thus: "In twenty-four hours, on a mixed diet, healthy men excrete about 60 gm. of solids with the urine, consisting of 25 gm. of inorganic and 35 gm. of organic substances."

Of course physiologic chemists and others who have followed the developing literature closely are in no way misled by such statements, and the authors themselves would probably be the last to attach much importance to them. I quote them here merely to illustrate the lingering tendency to confound an average with a normal composition of the urine.

But the figures quoted may serve to call attention to what I believe is another fallacy in the statements concerning the composition of urine. I mean the assumption of a high nitrogen excretion following the assumed *necessary* high protein intake. This last assumption had its origin in the views of Liebig regarding the relation of protein to work, and reappears in several of the so-called standard dietaries with which we are familiar. But practically, I believe, these dietaries, calling for high protein consumption, are not normal or standard except for limited groups of individuals. The great majority of men, especially those past 50 years of age, do not consume an amount of protein running from 125 to 150 gm. or more a day, and consequently cannot excrete an amount of nitrogen corresponding to such weights. If the experience of old or middle-aged men be considered along with that of the younger and more vigorous men with hearty appetites, or the experience of students, clerks and professional men along with that of the out-of-doors worker it would be found, doubtless, that the *average* urea excretion, dependent on the protein consumption, is nearer 20 than 30 gm. per day. If the excretion is less in women than in men it is so, not because of any essential difference in the direction of metabolism, but simply because of the lower protein intake.

The erroneous opinion regarding the urea output which obtains among medical men in this country is largely due to the very faulty method of clinical testing employed, and to the fallacy of thinking of urea in percentages, rather than in terms of grams per day. An *apparent* excretion of 2 per cent. is often observed, and this is assumed to follow an excretion of 1,500 to 2,000 c.c., since the books have long stated that this is the normal volume. But the 2,000 c.c. is seldom reached, and 1,000 c.c. is nearer the actual average in this country. I had a student who excreted a urine with 4 per cent. of urea, but the amount was not 60 gm. per day, but only about 24 gm. as the volume was seldom above 600 c.c.

To the chemist or physiologist the above statements regarding the relation of nitrogen intake and output must appear as self-evident, but to the clinician they are certainly not self-evident, and the tendency to look on the output of urine constituents as something apart from, and independent of, the protein intake is nowhere better illustrated than in the clinical report blanks of some of our hospitals. Without a record of the food consumption, what sense is there in such statements recorded on the blanks: "urea increased," "phosphates diminished," "sulphates normal"? Anyone who has had occasion to examine hospital reports has seen just such records. It should be recognized that the sulphur and the phosphorus, the calcium and the magnesium, as well as the nitrogen, vary with the food, and especially with the protein food, and that a normal urine must be one consistent with the food. One urine may be normal with an output of 15 gm. of urea per day while another with 45 gm. would be likewise normal.

Folin and others have given interesting illustrations of extreme variations in the composition of urine following the ingestion of special diets. Such variations may be shown, also, with perfectly normal diets, and I can illustrate this with two analyses showing changes in the nitrogen excretion of a man following a change in the diet. The analyses are of the urines of a young man in normal health, a student in my laboratory, who consumed through a period of about two weeks a rather liberal protein diet, and later, through another period of two weeks a diet poorer in protein, but still sufficient for his taste and needs, along with more fat and carbohydrates. The figures given are the means of daily results through ten days in each case, and obtained from determinations on the whole excretion for the twenty-four hours.

A.—Urine of First Period in Gm.		B.—Urine of Second Period in Gm.	
Total nitrogen	12.58	Total nitrogen	7.30
Urea nitrogen	10.64	Urea nitrogen	5.56
Urea	22.80	Urea	11.91
Creatinin nitrogen	.68	Creatinin nitrogen	.64
Ammonia nitrogen	.40	Ammonia nitrogen	.24
Uric acid nitrogen	.22	Uric acid nitrogen	.15
Purin nitrogen	.06	Purin nitrogen	.05
Rest nitrogen	.58	Rest nitrogen	.56

An interesting light is thrown on these figures if we calculate from them the nitrogen partition, that is, show in percentage form the distribution of the nitrogen among the several compounds containing it. This calculation is given as follows:

A	Per Cent.	B	Per Cent.
Urea nitrogen	84.58	Urea nitrogen	76.16
Creatinin nitrogen	5.40	Creatinin nitrogen	8.78
Ammonia nitrogen	3.18	Ammonia nitrogen	4.66
Uric acid nitrogen	1.74	Uric acid nitrogen	2.06
Purin nitrogen	.48	Purin nitrogen	.68
Rest nitrogen	4.62	Rest nitrogen	7.66
	100.00		100.00

The analyses of urines of "starvation artists" and of people on low protein, or starch and cream diets show that the urea nitrogen may fall as low as 50 or 60 per cent. of the whole; but this case is interesting, since the lowest diet in question was a perfectly normal one and sufficient to keep the man in perfect health and nitrogen equilibrium for weeks or months, without loss of weight,

as I have observed with other students over rather long periods. Urines of the B type, with about 75 per cent. of the nitrogen in the form of urea, in place of 85 per cent. as usually stated, are perfectly normal and must be considered in framing any definition.

But as we ordinarily use the term "normal urine" it is employed in a sense somewhat different from that suggested by the above paragraphs. We usually employ it to describe an excretion free from constituents arising in some pathologic condition in the body, and in this sense it is necessary to distinguish between so-called pathologic and normal products in the excretion. This conception is not a clear one because it leaves out of consideration the well-known facts—that is, well-known to physiologists — that certain substances commonly called pathologic are usually present in small amounts in all urines, and that other substances classed as normal may indicate a pathologic condition by a change in the proportions in which they are present. It becomes important, therefore, to study the relations of some of these so-called pathologic constituents, and uric acid and the other purins, ammonia and the sulphur excretion, as well as albumin and sugar, should receive attention.

While many of the mysteries connected with uric acid have been cleared up, and the "uric acid diathesis" is no longer the gold-mine to the medicine manufacturer it was some years ago, enough remains to be very puzzling at times. The relation of ingested purin-furnishing foods to the excreted uric acid, the extent of the uricolytic action, varying apparently from individual to individual, the relation of the unoxidized purins to the final uric acid, are all points which must be more fully elucidated before we are able to fix the limits of what may be called the normal excretion of these bodies. While it is something which might be expected, the fact is generally overlooked that an enormous increase in the purin output may follow from the consumption of a few ounces of chocolate-coated confectionery. I have frequently noticed that 100 mg. daily of purin nitrogen may be added to the usual excretion by eating a few large chocolate "creams" of a well-known variety sold in most of our cities. The ordinary relation between the uric acid and the other purins becomes here reversed, and I mention the fact to call attention to the necessity of knowing about the diet before a judgment from the figures of a urine analysis is safe. Ordinarily a relation such as this would be looked on as abnormal. After the consumption of such chocolate confectionery the increase in the purins persists for several days, and seems to reach a maximum on the second or third day. The increase in the purins from the ordinary nuclein substances seems to follow much more rapidly.

It is only within recent times that much attention has been paid to the extent of the ammonia excretion, and this partly because of the fact that until a short time ago simple and satisfactory methods of examination were not available. Ammonia in normal urine was looked on as of very trifling importance and the relation to certain acidoses was not suspected. Now, with many more facts known, and with reliable methods of determination, the question of the range of the ammonia excretion assumes much more importance. The ammonia nitrogen of the urine in health may make up from 4 to 7 or 8 per cent. of the total nitrogen output, while in diabetes it may make up 25 per cent. or more, the urea being correspondingly diminished. The relation of this excretion to that of certain organic acids becomes very important, and we have here a good illustration of a substance which, while always present, furnishes a pathologic indication when the amount is much increased.

In attempting to define a normal urine the greatest importance attaches to those substances which are usually regarded as pathologic, but which may in reality be always present in small amount. We have here, especially, traces of sugars, albumin and certain forms of casts. By the use of very delicate reagents it is possible to detect what must be considered as an albumin in all normal urines. I believe that authorities in general now regard that point as settled, but, limiting ourselves to the use of the common tests for albumin as clinically applied, it is still true that a very considerable number of urines from healthy individuals show traces of albumin which may be recognized by the nitric acid ring, or by heating after the addition of a trace of acetic acid, or enough to acidify. It has often been pointed out that soldiers on long marches, or athletes after strenuous exercise, very frequently void urine showing a little albumin, but it is not so generally recognized that in apparently normal men at ordinary pursuits the occurrence of albumin is by no means rare. The recognition of this fact is of importance, and by overlooking it grave mistakes have been made. It is not sufficient to say, as some authorities have said, that any urine showing albumin is pathologic, since such simple factors as diet and posture may sometimes give rise to its presence.

The same thing may be said of hyaline and certain other forms of casts. At one time, and not so long ago, their appearance was looked on as a gravely pathologic indication, but in recent years the situation has greatly changed, and largely because the means of examination are now much more perfect. Before the introduction of the centrifuge urines were allowed to stand some hours, or even a day, before testing in order to let them settle. In this interval bacterial action frequently destroyed every vestige of a cast, and even when this did not happen the sedimentation was at best imperfect. In either event casts were rarely found except when very abundant. With our present, properly speeded centrifuges it is possible to secure practically complete sedimentation and make the examination in a few minutes. Under these conditions we find the casts where before they would have been overlooked.

During the past ten years it has been my custom to require from the members of one of my classes frequent examinations of their own urine. These tests have given some interesting results which may be illustrated by the data tabulated during the last school year by one of my students, Mr. J. W. Boren. Examinations were carried out on the urines of forty men, who from the usual physical examination and history might be considered as in normal health. In each case ten tests were made in two weeks, and if no albumin was found the examinations were dropped. Following an appearance of albumin the tests were kept up to get some idea of frequency and conditions of occurrence. In some cases nearly 100 tests were made, the examinations lasting through three months. In all, 1,042 examinations were made on the forty men, an average of twenty-six to each man. Casts were found in 6.5 per cent. of all the urines examined, and in 62.5 per cent. of all the men. Corresponding to modern experience, but in conflict with the older view, albumin is much less frequently found than are casts. In this work albumin was found in six of the forty cases, or 15 per cent. against 62.5. In four of these men the albumin was very rarely found, while the occurrence was frequent with the other two. In one of them the morn-

ing urine was free from albumin, but appeared about noon, after the man had stood two or three hours at a laboratory table. With the other man the albumin was found occasionally in the morning, but very frequently after his work in the laboratory in standing posture. We have here evidently two cases of the orthostatic type, which is not exactly uncommon. These men were under observation a year before the tests were made and have been watched since. They appear to be in good condition in other respects, but what may develop later cannot be foretold. Such cases suggest the desirability of keeping long records, through years if necessary, of urines about which there is any suspicion concerning the occurrence of albumin. The records kept by some life-insurance companies have value in this regard.

As it is hard to draw the line in the question of the traces of albumin in urine, so it is almost equally puzzling to reach a sharp conclusion concerning the meaning of sugar present. All urines show a so-called normal reduction, which is variable in extent from individual to individual. I have had observations made on the urines of all the men in large classes for years back and find a rather wide range in this reducing power. Several substances besides the carbohydrate, especially creatinin and uric acid, are factors in the reduction, but when the effect of these is eliminated the fraction which must be charged to the sugar body is sometimes large enough to be difficult of interpretation. The condition may be normal, or it may suggest incipient diabetes. Here longer and systematic observations are necessary, as with the albumin.

In the metabolism of the protein substances the larger part of the sulphur fraction appears as an inorganic sulphate in the urine, a much smaller amount comes out in the so-called ethereal sulphates, while a very considerable amount fails to be completely oxidized and forms the so-called neutral sulphur of the urine. I believe that too little attention has been given to the proportion in which this neutral sulphur appears, and the condition of its appearance. While it is well known that it may make up from 15 to 25 per cent. of the total sulphur output in health, it has been shown that the fraction in disease may run considerably higher, and attempts have been made to connect it with diminished urea and the failure in the normal oxidative functions of the body. In much of the literature the output of neutral sulphur recorded is not well coordinated with the amount of ingested protein. With improvements in the methods of sulphur determination the variations in the neutral sulphur should be the subject of much more frequent clinical observations.

I have called attention to a number of facts which, while well known to those interested in the chemistry of the urine, are often not known or are overlooked by clinicians. I speak of them to emphasize the practical difficulty in giving a concise answer to the question, what is normal urine. Normal urine is not only a function of the diet, and this is quantitatively the main factor, but it is a function also of certain idiosyncrasies in each individual. It is this factor which makes the greatest difficulty in coming to a conclusion in many a doubtful case, and which suggests the necessity of admitting a much wider range in certain factors than is usually the case. Our more modern quantitative methods for the urine should permit a closer relation between clinical observations and chemical findings in those cases in which the question of normal limits may assume considerable practical importance.

THE ORGANIZATION AND THE SYSTEM OF EXAMINATIONS OF THE CONJOINT EXAMINING BOARD

OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND *

FREDERIC G. HALLETT, SECRETARY
LONDON, ENGLAND

In order that I may explain our organization and system of examination, it is necessary for me to enter into considerable detail, for it is mainly to the details of the organization that the success of the examination system is due.

The problem awaiting solution with you is, I understand, the development of an uniform system of state examination which shall be of such a character as to secure to the public a guarantee that the doctor who holds a state license has shown adequate proof of his ability to practice his profession. If in the smallest degree our methods of testing candidates for their fitness to practice prove to be worthy of your imitation or of use in guiding you to a still more serviceable system, it will be a source of great satisfaction to the royal colleges and, I need hardly add, to myself also.

Our system of examination has gradually developed as the result of many years of experience in dealing with large numbers of candidates. By large numbers I mean anything from 500 to 800 a year, and the system is so arranged that after the papers are written, the clinical, practical and oral work of each batch of men—from twenty-five to fifty—is completed in one or two days, so that an addition of 100 men at any time means merely four more days' examination.

In Great Britain and Ireland there are several ways in which the license to practice can be obtained. Any graduate in medicine of one of the universities is entitled to be registered as a medical practitioner without further examination; his university M.D. diploma entitling him to practice; in addition several ancient corporations, the Royal Colleges of Physicians and Surgeons in each division of the kingdom and the Societies of Apothecaries, can grant a license with similar privileges, the only difference being that those who hold diplomas of the corporations cannot call themselves doctors of medicine, or use the letters "M.D."

The most important of these professional bodies, however, is the Conjoint Board of the Royal Colleges of Physicians and Surgeons in London. Previous to the year 1884 each of these colleges held separate examinations and granted their diplomas separately. The license of the Royal College of Physicians was always claimed to be a complete qualification in medicine, surgery and midwifery, but the membership of the Royal College of Surgeons was a surgical diploma only, although curiously enough, when once placed on the register, that diploma entitled its owner to practice all branches of the profession.

In 1884, the two colleges combined for the purpose of the examination of students for a complete license to practice, and it is of importance to understand that this organization is in the hands of men who have risen to the highest positions in the medical profession. No influence, commercial, political or financial, can be

* Read before the Conference on Medical Education of the American Medical Association, at Chicago, Feb. 26, 1912. The discussion on Mr. Hallett's paper will be found under Society Proceedings in this issue of THE JOURNAL.

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brought to bear on this combination of corporations. Their independent and high position enables them largely to control and guide medical education, to set a high standard of examination and to maintain honored traditions.

To explain their position it is interesting to recall that the charter incorporating the Royal College of Physicians is dated 1513, while the Royal College of Surgeons, although dating back to 1745, when it was known as the Company of Surgeons, is really descended directly from the Barber Surgeons Company, the records of which go back to the year 1308. I do not intend to go further into the subject of examinations in those early days, for I do not think we have much to learn in the way of examinations from our forefathers, who would, I fancy, be rather astonished at the elaborate detail of the present day ordeal of a qualifying examination!

The Royal College of Physicians is governed by the body of Fellows to the number of about 350. These Fellows, or such of them as take interest and attend meetings of the college, have an equal voice in the discussions of the college. There are standing and special committees which are appointed from time to time to consider any question of policy or of education on which the college may desire advice. The Fellows include all the physicians to the well-known hospitals in London and many of those in the provinces, as well as a certain number of distinguished foreign and colonial physicians.

The Royal College of Surgeons is governed by its council—a body of twenty-four members. This council is elected by the Fellows of the college, who number some 1,500. The councilors are all either active members of the surgical staffs of the large London and provincial hospitals or have only recently resigned their appointments. The council is, therefore, composed of well-known surgeons of established reputation, all or nearly all of whom are engaged in regular clinical instruction.

Each of the royal colleges appoints three members to a body called the Committee of Management, which is the administrative body of the Conjoint Board, and of which I have been secretary since its establishment in 1884. Its duties are as follows:

1. To arrange the examinations in accordance with the regulations approved by the royal colleges.

2. To appoint visitors of the first and second examinations.

3. To consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by either college or by both colleges, and to report thereon.

This committee is intentionally small as it is essentially a business committee, and those who have experience of business matters know well that a small committee is generally the most business-like. No member may serve as examiner, but the committee generally consists of those who have been at some time or other examiners of the board. It is interesting to me to remember that among the distinguished physicians and surgeons who have served on this committee are Lord Lister, Sir William Savory, Dr. Ord, Sir Henry Pitman, Sir William MacCormac, Sir Jonathan Hutchinson. The present committee consists of Dr. Norman Moore, a former senior censor of the Royal College of Physicians; Dr. Frederick Taylor, present senior censor of the college, whose text-book of medicine is well known; Dr. Ormerod, the registrar of the Royal College of Physicians; Mr. Rickman J. Godlee, the present president of the Royal College of Surgeons; Sir Henry Morris, Bart., a past president of the college; and Sir William Watson Cheyne, Bart., C.B., F.R.S., a past vice-president of the college.

The Committee of Management cannot alter the regulations relating to the course of study or the conditions of admission to the examination, without the authority of the royal colleges. They may consider and report to the royal colleges on any proposal which may be made relating to the course of study or the examinations, and they are authorized to call together for consultation any teachers of any subject who may be interested in a particular proposal. In the first professional examination in chemistry, for instance, if any suggestion is made for alteration in the form of examination or in the syllabus of the subject, the committee would be authorized to consult the teachers of chemistry in the medical schools, and if thought desirable the teachers of the other subjects of the first year of the curriculum. In addition they may, and do, from time to time take the opinion of the deans of the medical schools. These bodies are consulted together or separately, and as a result of the joint deliberations between the committee and the teachers, a report is made to the royal colleges by the Committee of Management. The same applies to other subjects of the first examination and to the second examination in anatomy and physiology. When any question of importance relating to medicine or surgery comes up for consideration, it is generally dealt with in the first place by the royal college respectively interested, and if any decision affecting the curriculum or examination is determined on, the Committee of Management is then requested to draw up the necessary conditions and to report to both colleges. It will be seen, therefore, that the Examining Board of the Royal Colleges, while entirely independent of all medical schools and hospitals, has close relation with the teachers in all branches, while its governing bodies are composed largely of active clinical teachers. It is to be noted, also, that any alteration in the regulations of study made by the royal colleges is carried out at once in all medical schools in England, whether university medical schools or not, for the reason that, by virtue of the influence exerted by the royal colleges through their examinations, which are taken by university as well as by purely conjoint students, no medical school could allow itself to be in the position of not supplying all the conditions required by those students who desire our diplomas.

Our first examination consists of chemistry, physics, and biology, and is taken usually after about nine months' study in a medical school or in an institution recognized by the board for the purpose. Certain secondary schools where modern and equipped laboratories exist are recognized for this purpose, provided that the masters are properly qualified to teach these subjects. No such school or institution is recognized until it has been inspected by a member of the Committee of Management. Students cannot enter for the first examination until they have completed 180 hours of instruction in chemistry, 120 hours of physics, and 120 hours of biology. If a student presents himself for examination from one of these institutions, whatever may be the duration of his course of study, it will count only for six months of the curriculum, leaving therefore four and one-half years to be completed at a medical school and hospital. The instruction may be taken partly or in whole before the entrance examination in general educa-

tion is passed, but if this is the case a full five years' curriculum of professional study must be completed after the entrance examination is passed.

The examination in chemistry consists of a written paper of nine questions, five in inorganic and four in organic chemistry, six of which must be answered, and for which three hours are allowed. There is also a practical examination of three hours' duration, which includes a qualitative analysis of a single salt or a mixture of two metals and one acid, a simple volumetric analysis and the preparation of a chemical compound in a well-crystallized condition.

A synopsis of this practical examination is issued.

The examination is conducted in our own laboratory where we can take as many as eighty candidates in one batch. The examiners can add a *viva voce* examination in doubtful cases.

The examination in physics is conducted with a paper of two hours' duration consisting of six questions, of which four must be answered, and a practical examination with physical apparatus, during which the examiners take each candidate orally. Candidates are taken in batches of sixteen an hour.

The examination in biology consists of a two-hours' paper of six questions, of which four must be answered, and an oral examination on specimens, each candidate being examined for a quarter of an hour.

A candidate must enter for chemistry and physics together, but he may pass in one only, provided he obtains half the marks required to pass in the other subject. He may take biology separately.

Now the board does not allow a student to commence the study of anatomy and physiology until he has passed in two of three subjects of the first examination. We do not countenance overlapping of the subjects of the first, second and third examinations, but we feel that if the student has only one subject of the first examination still to pass, he may fairly be allowed to commence anatomy and physiology. He must, however, complete the first examination before entrance to the second examination. Between the first two examinations we have, therefore, only a partial block system.

For the second examination a student must dissect during twelve months of the regular sessions and his dissections must include the whole body. He must also attend a course of lectures on anatomy for six months, a course of lectures on physiology for six months, and a course of practical physiology, including histology, also for six months.

The examination consists of papers in anatomy and physiology of eight questions, in each of which six must be answered. They are followed by a *viva voce* examination in each. In anatomy the candidate is examined by one examiner on a freshly dissected body, on preserved specimens, on a living model, etc.; while in physiology he is examined on various instruments, apparatus and diagrams, on histology and physiologic chemistry. In each case another examiner assesses.

Between the second and the final examination there is an absolute block, that is to say, no student may commence the courses required for his final examination until he has passed the examination in anatomy and physiology, and an interval of two years must elapse between the examinations.

During the interval of two years the student is constantly occupied in practical work, both out-patient and in-patient. He has to be a medical clinical clerk and surgical dresser in both out- and in-patient departments, as well as clerk in the gynecologic wards. He has to attend in the ophthalmic department, to attend pathologic histology, clinical pathology and bacteriology, fever hospital practice, clinical demonstrations in a lunatic asylum, besides systematic lectures.

I have dealt very shortly with our earlier examination and with the curriculum of study because I believe that you will be more interested in our final examination, about which I feel that the fullest details are necessary in order that the system may be understood.

In regard to these certificates of attendance on the various courses of lectures, hospital practice, clinical lectures, dressership, clerkships, post-mortem work, etc., we make a very important provision, and that is that every certificate should contain evidence that the student has attended to the "satisfaction of his teachers." This enables a teacher of any subject to enforce discipline in his class, to bring pressure to bear on the slack and idle student, and to encourage thoroughness in attendance, because any one certificate presented by a student with these words deleted would prevent him from presenting himself for the examination. Fortunately it does not often occur that such a certificate is presented to me, because the moral influence of such a regulation is sufficient to enable the medical school authorities to exercise control over the work of their students.

A most important element in our organization is the appointment of the examiners in the final subjects, and on this point I must lay particular stress because we consider that it is largely to the position and reputation of the examiners whom the royal colleges can command that the prestige and high standing of our diplomas is due.

Ten physicians are appointed examiners in medicine by the Royal College of Physicians, ten surgeons by the Royal College of Surgeons to examine in surgery, five examiners in midwifery by the Royal College of Physicians and four by the Royal College of Surgeons. In all cases the examiners are chosen from members of the staffs of the hospitals connected with medical schools either in London or at any of the university centers. They need not necessarily be professors on their subjects, but they must be members of the staff of a large hospital and therefore actively engaged in clinical teaching. It is customary for the examiners appointed by the Royal College of Physicians to serve for four years, while those appointed by the Royal College of Surgeons are elected for five years and may be reelected for a second period of five years.

At the present time we have nine physicians from London hospitals and one from Manchester, while in surgery we have eight from London hospitals, one from Leeds and one from Birmingham. In midwifery we have eight from London hospitals and one from Liverpool.

It has never been found, at either college, that any difficulty arises in regard to filling these appointments with leading physicians and surgeons, for it is not only felt to be an honor to examine for the royal colleges, but it is considered important to a medical school and hospital that one of the staff should be on the examining board; consequently, there is the inducement to an examiner to serve the Conjoint Board both for his own reputation and for that of his school and hospital, although it must be added that the office not infrequently involves a pecuniary sacrifice on his part. Naturally, the examination takes up a considerable part of the examiners' time, but we arrange as far as possible to consult the convenience of the examiners by fixing such

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hours as will enable them to devote some part of each day to their own practices, and we break from time to time the sequence of days so as to give them a little respite. For instance, in medicine the papers are on a Tuesday and Wednesday, and the first clinical and oral examination is on the following Saturday; then in the next week they examine on the Tuesday, Wednesday and Friday, and if more days are required, in the subsequent week on the same days. Thus an examiner has time to read his papers, to take part in the clinical and oral examination, and to see his own patients. Very much the same applies to midwifery and surgery.

We remunerate the examiners as liberally as possible, and indeed it may safely be said that our examinerships are the most valuable in the country. Last year, for instance, each examiner in medicine received £260; each examiner in surgery received £265; and each examiner in midwifery received £140. The fees for the examiners are determined by the number of candidates; in other words, we pay by capitation fee. Taking the number of candidates examined per day—twenty-four in medicine and surgery and thirty-two in midwifery—the fees work out approximately at £10 a day for each examiner. It occasionally happens that an examiner resigns his office on account of the pressure of his private practice, but it has been a very rare occurrence. Fortunately, as I have already said, there has been no difficulty hitherto in securing examiners of high reputation to fill these positions.

The list of past and present examiners of the royal colleges is one long line of distinguished men known for their scientific reputation, highly respected by their professional brethren, and many honored by their sovereign.

Table 1 gives a list of the various universities and other medical school and hospitals from which we can and do draw our examiners.

TABLE 1.—LIST OF RECOGNIZED MEDICAL SCHOOLS IN ENGLAND

Oxford University.			
Cambridge "			
Durham "			
London University	University College	Incorporated colleges of the University	Schools of the University
	Kings College		
	St. Bartholomew's Hospital Medical School		
	Guy's " " "		
	St. Thomas' " " "		
	London " " College		
	Middlesex " " School		
	Charing Cross " " "		
	Westminster " " "		
	St. Mary's " " "		
	St. George's " " "		
	London School of Medicine for Women.		
Victoria University, Manchester.			
Birmingham "			
Leeds "			
Liverpool "			
Sheffield "			
Bristol "			

The examinations are held four times a year, in January, April, July and October, with the result that if a man fails at one examination he can present himself again in three months' time, but during the interval he must attend again the practice and clinical lectures at a recognized hospital.

Some ten days before the commencement of an examination each separate board of examiners—medicine, surgery and midwifery — is summoned to set questions for the papers. They meet at the Examination Hall and each examiner brings with him one or two questions for discussion; together they select the requisite number of questions, frame them carefully, and so determine the papers.

For the examination in every subject the examiners are paired, that is to say, two examiners always examine together, while every paper must be read and marked by two examiners. The standard of the examination is maintained by tradition, for it rarely happens that more than two examiners go off at a time, frequently only one, and when a new examiner is appointed he is invariably set to examine on the first two or three occasions with one who has been on the board for some time. He learns, therefore, from experienced examiners the range of the examination, the standard of marking, and the traditions attaching to the ordeal. By this means and by constant changes in the pairing of examiners we believe that there is, year in and year out, very little, if any alteration in the standard of the examination. That the standard is a high one is shown by the percentage of rejections. The average annual numbers for the last five years have been as follows:

Total	Passed	Referred	Percent. of Rejections
	MEDICINE		
639	389	250	39
	SURGERY		
690	374	316	45.6
	MIDWIFERY AND GYNECOLOGY		
567	377	190	38

The royal colleges do not profess to turn out an expert in any branch of the profession, but they do aim at assuring the public that a man who has obtained their diplomas is well qualified to practice. For this reason we do not hold separate examinations in special subjects; but from the fact that all subjects are included in one or other branch of the final examination a student must get up his work in all departments. He will be examined very thoroughly in general medicine, surgery and obstetrics, with a liability to be taken over special branches according to the patients brought down on the day of his examination, or to the particular branch of the subject which an examiner may think fit to examine on at the oral part. In the papers there are always questions on forensic medicine, therapeutics, hygiene, pathology, medical and surgical anatomy, as well as in general medicine and surgery; and although it is not absolutely necessary that a candidate should answer every question in each paper, yet it is well known that if he leaves any unanswered he is likely to suffer thereby. This of itself necessitates a thorough preparation in all branches.

Candidates who intend to present themselves for the examination must deposit in my office, fourteen days beforehand, a schedule of certificates showing that they have attended all the courses of study required by the regulations, extending over a period of five years. These schedules are all examined by me, and if I find that there is any irregularity in the certificates, or that any condition has not been fulfilled, I have the power to exclude a candidate from the examination.

We have an Examination Hall which was specially built for the purpose, in 1886, at a cost of £26,000, containing large examination rooms, waiting and cloak rooms, a chemical laboratory, an anatomic room, as well as the administrative offices. This building is now found to be inconvenient owing to various developments in the examination, and a new Examination Hall is being erected by the royal colleges in the west central district of London at a cost, including the freehold site, of £50,000. We expect to move into the new building in May next.

My staff prides itself on making all arrangements so complete for the examinations that the examiners shall have nothing to do except to examine. The details are so worked out that every examiner knows which candidate he has to examine in each part. We inform every examiner of the number of patients he has to provide for each day, at the same time sending him cards to be given to the patients for each of the several days' examination. We remind them that they must provide the pathologic specimens, macroscopic and microscopic and other examination material. We also give them a program of the exact days and hours of their attendance. We impress on them the absolute necessity of punctuality and the importance of adhering strictly to the rules laid down by the Committee of Management, for we maintain that in dealing with a large number of candidates, unless system, punctuality and regularity are maintained, it is impossible to guarantee equality and thorough impartiality in the examination.

An important point in our system is that every candidate, when he has entered his name, is known by number only. The list of candidates for each part of the examination is compiled by my staff, and the examiners are given only the numbers of those whom they have to examine in the several parts. Occasionally it happens that an examiner may be struck by the excellence, or the reverse, of some candidate's examination, or he may fancy he recognizes some one and he may ask "Who is so and so?" or "Where does he come from?" The invariable answer is: "You shall know when the examination for the day is completed and the report is determined." No personal influence is allowed to affect the result of the examination, and none is ever attempted.

I will now proceed to describe the examination in medicine. Of the ten examiners appointed, we employ only eight at a time, leaving two to sit out in rotation. These may be asked to fill any vacancy caused by illness or urgent call. The examiners (eight in number) are divided into four pairs called A, B, C, D, and in order that the details of the system may be followed, I give (in Table 2) the actual names of the present examiners and the hospitals to which they are attached. At section A there will be, we will say, two examiners from St. Bartholomew's and Middlesex hospitals, while at B there will be two examiners from University College Hospital and Manchester. These four examiners will examine all the candidates bearing odd numbers and, therefore, in the office we arrange that no candidates from the hospitals in question are allotted odd numbers. In the same way, sections C and D will be examiners from King's College and St. Mary's and from London Hospital and Westminster, respectively; consequently in the office we arrange that no candidate from those hospitals are allotted to even numbers. Students from other medical schools (not represented by examiners) are fitted into either odd or even numbers to balance the two sides.

When the papers are written, the odd numbers are sorted out and put together. From these odd numbers the alternate numbers 1, 5, 9, 13, etc., are sent to section A, and the others, 3, 7, 11, 15, etc., to section B, half of the papers allotted each section being sent to each examiner of the section. The two examiners of a section read the papers sent to them and exchange with one another, so that by the time the clinical and oral examinations commence, the examiners have read the papers of those candidates who will be examined on any particular day. They will not only have read them, but before the clinical examination commences they will have discussed them, and if there is any difference in the marking of the two examiners, they will go through the paper together and agree on the mark to be allotted. In practice, it is found that the marking of the individual examiners is extremely close and that very little adjustment is required before the final mark is awarded. In case of a difference of opinion, benefit of the doubt is given to the candidate. On the Saturday following the two medicine papers, the first batch of the clinical examination is held at the Examination Hall, where we arrange two large rooms temporarily as hospital wards, one for males and the other for females. These rooms are shown in Figure 1—the longer one is 100 by 33 feet, and the smaller 60 by 25 feet. The patients are sent by the examiners from their hospitals, and each patient brings a card on which are endorsed short notes of the case. These patients are either selected by the examiner himself or by his house physician, and may come from the wards or from the out-patient department, and they are dispatched in cabs, the expense of which the examining board pays. We also give to each patient a fee for coming. The examiners take the trouble to vary the cases as much as possible, as will be seen from the following list of patients who attended on one day during the last examination.

List of Medical Patients in Attendance on Saturday, Jan. 13, 1912

1. Hemiplegia with phthisis—probably tuberculous—of brain.
2. Paraplegia from caisson disease.
3. Morbus cordis—mitral stenosis.
4. Rheumatoid arthritis from gonorrhea.
5. Old hemiplegia—probably thrombotic.
6. Chronic arthritis—rheumatoid.
7. Ascites—cirrhosis of liver.
8. Dorsal myelitis—spastic paraplegia.
9. Aortic regurgitation.
10. Mitral regurgitation with pulmonary infarction.
11. Splenomedullary leukemia.
12. Chronic pulmonary tuberculosis.
13. Aortic and mitral disease—rheumatic endocarditis.
14. Alcoholic cirrhosis of liver.
15. Pulmonary apical consolidation—probably pneumonic.
16. Aortic regurgitation.
17. Disseminated sclerosis.
18. Granular kidney with hydatid of liver.
19. Endocarditis—mitral regurgitation—enlarged liver and spleen.
20. Hypertrophy of heart—interstitial nephritis.
21. Hypertrophic muscular dystrophy.
22. Lichen planus—general distribution.
23. Thoracic aneurysm obstructing superior cava and pressing on trachea.
24. Locomotor ataxia with ptosis and optic atrophy.
25. Tuberculous peritonitis.

It will be noticed that in each department, male and female, there are so many beds and chairs allotted to each section, the partitions being formed by movable screens. It may happen that on one day Section A, for instance, has two males and four females, in which case the extra beds will be taken from the male room and put into the female room for Section A; but usually the beds are distributed as shown in Figure 1. At the time of commencing, 2 p. m., four candidates are brought into the room; one is taken to each pair of examiners—A, B, C, D. The examiners from Section A tell their candidate to examine one of the patients, and he is left alone ten minutes to make his examination of the patient. The same happens at each of the other sections. At the end of ten minutes the examiners go to him, one

of them takes him carefully over the case, while the other listens and assesses. The examination on this first case continues for the period of ten minutes, and is known as the long case. At the end of the second ten minutes the examiner who has been assessing then takes the same candidate over two or three short cases for another ten minutes, while the first examiner assesses. At the commencement of the third period of ten minutes a second batch of four candidates is brought in, and so overlaps the first batch by ten minutes, and when at the end of this third period of ten minutes, the first candidate is dismissed, the second man has completed his ten minutes' preliminary examination of the long case by himself and is then taken by the first examiner over it. Although, therefore, the examiners have before them a candidate for twenty minutes only, the candidate himself is under examination for half an hour. By this method we can take twenty-four candidates in two hours

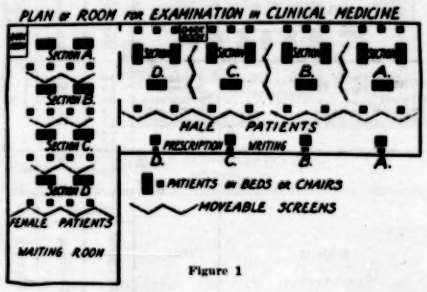

Figure 1

and ten minutes, six candidates by each section. In every case the examiners allot their marks as the candidate leaves them. They may divide their marks between the long case and the short cases, or they may mark the candidate on the whole, according to their individual judgment, but they must allot their marks immediately on the completion of the candidate's examination.

I may here point out that as the papers of Candidates 1 and 5 have been examined by Section A, Candidates 3 and 7 are examined by Section A at the clinical examination (see Table 2), and, therefore, their mark on the clinical examination is given without knowledge of what the candidate has done on his papers. When each candidate has finished with the examiners, he goes to a side table and he is required to write a dietary table and prescription for some hypothetic case which is given by the examiners. These written dietary tables and prescriptions are not marked with the clinical examination, but are handed to the examiners at the oral part of the examination in the evening and are taken into account in allotting the mark at that examination.

It may be thought that there would be danger of the candidates obtaining knowledge of the patients on which they were to be examined, but, in the first place, it will be noticed that as the patients are sent by the examiners from their own hospitals, and as the examiners do not examine their own students, it is obvious that the students are examined on patients from hospitals other than their own. The question of collusion between the students of the hospitals in order to find out what patients are being sent, does not appear to us to be of importance because each student will not be examined on more than three, or at the most four, out of at least twenty-four patients, and there is no means of knowing beforehand by which examiner and on what cases he will be examined. But even supposing that the candidate did know beforehand of a case which he was examined on, the experience of the examiners in discussing with him the signs and symptoms is quite sufficient to guard against any undue advantage from this cause. To avoid the possibility of those who have been examined early in the afternoon communicating the cases to those who come later, a very simple expedient had been adopted. We summon half the candidates to attend at 1:45 and shut them up in a room by themselves. By the time that the third batch of four men, or half the candidates for the afternoon examination, have gone into the room, the second twelve are summoned to another room and kept there until the first twelve have left the building. By this means we keep those who have been examined separate from those who have to come, and yet no candidate is kept waiting for any very long period, a point which must be considered when we think of the state of mind of a candidate about to be examined!

The examiners are free then at 4:10 p. m. until they reassemble at 7:40 in the evening for the oral and practical part of the examination in another room arranged as shown in Figure 2. At one end of the table of each section there are all the reagents required for urinary tests and sets of microscopes, while at the other end there are dishes of gross pathologic specimens either fresh or preserved. In the same way as at the clinical examination, four candidates are brought into the room at 7:50, by which time the examiners have arranged specimens under the microscopes and have put out so many specimens of urine. The candidate at each table is told to test one urine and to look at the three specimens under the microscopes. They are allowed ten minutes to do this by themselves. At 8 o'clock the candidate moves to

TABLE 2.—ARRANGEMENT OF EXAMINATION IN MEDICINE FOR ONE BATCH OF TWENTY-FOUR CANDIDATES

			Paper	Clinical	Oral and Practical
Section A—					
Dr. Herringham	St. Bartholomew's	Examine.....	1, 5, 9, 13, 17, 21	3, 7, 11, 15, 19, 23	1, 5, 9, 13, 17, 21
Dr. Voelcker	Middlesex				
Section B—					
Dr. Sidney Martin.....	University College	Examine.....	3, 7, 11, 15, 19, 23	1, 5, 9, 13, 17, 21	3, 7, 11, 15, 19, 23
Dr. Berry	Manchester				
Section C—					
Sir Hugh Beevor.....	King's College	Examine.....	2, 6, 10, 14, 18, 22	4, 8, 12, 16, 20, 24	2, 6, 10, 14, 18, 22
Dr. Harris	St. Mary's				
Section D—					
Dr. Hadley	London (Hosp.)	Examine.....	4, 8, 12, 16, 20, 24	2, 6, 10, 14, 18, 22	4, 8, 12, 16, 20, 24
Dr. Hebbs.....	Westminster				

The candidates bearing odd numbers may come from any medical school except St. Bartholomew's, Middlesex, University College or Manchester. The candidates bearing even numbers may come from any medical school except King's College, St. Mary's, London or Westminster. The same arrangement is used for the examination in obstetrics

the table in front of the examiner, who then takes him over the urine and specimens and any other subject he likes for ten minutes, while the second examiner assesses. At the end of that ten minutes the second examiner takes him over gross pathology and any subject he likes for ten minutes more, but during this last ten minutes another candidate is brought in and given one of the samples of urine and the same or other microscope specimens as the examiner thinks right. In the same way as at the clinical examination, the examiners award their marks as soon as the candidate has finished his examination, and they take into account the dietary table and prescriptions written by the student in the afternoon. By 10 o'clock the twenty-four candidates who were examined at the clinical examination in the afternoon will have been examined at the oral and practical part, and the examiners then retire to the committee room to decide on the result of the examination. Incidentally, I may mention that the specimens of urine are sent from the hospitals and brought by the patients in the afternoon, while the gross pathology specimens are arranged for by the examiners, who send from the museum of their own hospitals various preserved specimens, or fresh specimens from the post-mortem room.

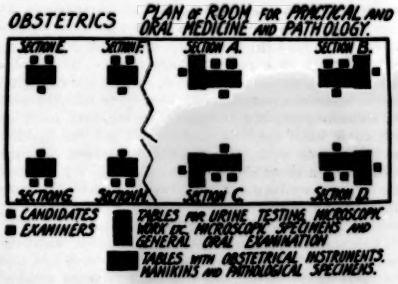

Figure 2

The examiners then sit round a table and the secretary calls out the number of the candidates in turn. Section A will give the marks on the papers of Candidate 1, Section B will call out his clinical mark, and Section A will call out his oral mark. These marks are totalled and the candidate is declared to have passed or failed. C and D will then give the marks of No. 2, B and A the marks of No. 3, D and C the marks of No. 4, and so on. There is practically no reconsideration of these marks as it will be observed that although 50 per cent. is considered the standard of the examination, the actual number — twenty-seven — is half a mark below 50 per cent. The system of marking is shown in Table 3. It is peculiar to the royal colleges and is somewhat ancient in character, but whether one marks in tens or hundreds is quite immaterial so long as one works to one definite standard.

The marks are small because, the examination being for a license to practice and not a competitive or honors examination, there is no necessity for very nice discrimination between the candidates. A man for example who writes good papers in medicine and surgery and midwifery would be marked 6, or 7, 12 and 6 respectively, but the man who is just sufficient for a pass would receive 5, 5, 9 and 5, respectively, while a poor man would only get 4 or 3, 6 or 7, and 4 on the papers. He may pick up by doing well at the clinical, practical and oral parts, but he must get 50 per cent. to pass in any subject. The minimum marks shown in Table 3 merely mean that if a student at any one part of the examination is marked below the minimum, he cannot pass even if, by doing exceptionally well on the other parts, he manages to reach a total of 50 per cent.

The candidates are summoned to return to the building by 10 o'clock, and by 10:45 each candidate is personally informed of the result of his examination. Those

TABLE 3.—CONJOINT EXAMINATION BOARD OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND *

MEDICINE

Subjects	Time	Marks		Marks to Pass
		Maximum	Minimum	
Written { Paper I	3 hours	10	6	27
Written { Paper II	3 hours	10	6	
Clinical	30 minutes	20	6	
Practical and oral	30 minutes	15	4	
Pathological and oral	30 minutes	15	4	
		55		

SURGERY

Subjects	Time	Marks		Marks to Pass
		Maximum	Minimum	
	3 hours	18	4	30
Written paper	30 minutes	12	3	
Clinical	15 minutes	10	3	
Surgical anatomy and apparatus	10 minutes	10	3	
Oral table 1	10 minutes	10	3	
Oral table 2				
		60		

MIDWIFERY AND GYNECOLOGY

Subjects	Time	Marks		Marks to Pass
		Maximum	Minimum	
Written paper	3 hours	10	3	10
Practical and oral table 1	10 minutes	5	1	
Practical and oral table 2	10 minutes	5	1	
		20		

* All papers must be read by both the examiners of a section.

who have passed are brought into the room where the examiners are sitting and are formally addressed by the chairman of the board and they sign their names in the register. Those who fail are given a printed notice telling them that they have failed and that they must attend the practice of a recognized hospital for three months before presenting themselves again.

It will be seen, therefore, that we arrange the various parts of the examination in such a way that there shall be no delay in arriving at the result, because we see no reason why, if the system is properly organized, there should be any time of suspense for the student between

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the completion of his examination and the announcement of the result.

SURGERY

The arrangement of the examination in surgery differs from that in medicine, because all five pairs of examiners are employed and it is the practice for every student to be examined in some part or other by each of the five sections. The system is shown by Table 4, and we provide in the office that no papers of students from, say, the hospitals represented by the examiners at Section A are sent to them to read. It follows that the students from these two hospitals must come before their examiners at some other part of the examination, but when this happens we put down the examiner who is not the student's teacher to examine him, while the other, his teacher, merely assesses. In this way the

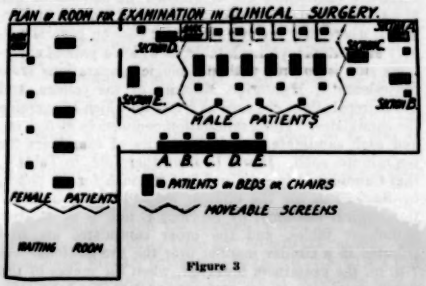

Figure 3

teacher never examines his own student and only assesses to the extent of one-tenth, while his colleague does not know that he is examining a student from the other's hospital. To avoid the possibility of a certain examiner having to take a series of candidates consecutively from his colleague's hospital, the list is made out in batches of ten, care being taken, for instance, that Nos. 1, 6, 11 and 16 shall not all be from the same hospital, although Nos. 1 and 11 may be from the same hospital and numbers 6 and 16 from another.

The patients are sent to the Examination Hall by the Examiners as in the case of medicine, and we usually arrange that there are at least thirty surgical cases present in the room. The examiners attend half an hour before the commencement of the examination, that is at 4:30 p. m., to select patients for what are again called the long cases. Figure 3 shows the arrangement of the room for the surgical examination. In the right-hand partition there are three beds and three chairs, and in the left-hand two beds and two chairs; the right-hand is for male and the left for female patients, but it depends on the number of those of each sex sent down whether all the long cases be male or not. The examiners select ten patients for the long cases, two of which are allotted to each section, and the examiners of that section fully examine those patients before the candidates go to them. The other patients are spread about the rooms and, unlike the medical cases, the surgical patients are common to all examiners. At 4:45 five candidates are brought into the room and one is sent to the two patients allotted to Section A, another to the two patients allotted to Section B, and so on; they are told that they have a quarter of an hour to examine those two patients. These are known as the long cases. At the end of the quarter of an hour's examination these five candidates go to their respective sections of examiners, and they are taken over the cases they have examined for about five or six minutes by one examiner while the other assesses, and during the remainder of the quarter of an hour they are examined on short cases by the same examiner. During the time these men are being examined, another batch of five students is brought into the room to examine the long cases. In this way, although each candidate is before the examiners for a quarter of an hour only, he has altogether half an hour's examination of patients. The examination continues until 7:15, by which time each section will have examined nine candidates and a total of forty-five will have been examined on patients. The following is the list of patients in attendance Monday, Jan. 15, 1912:

LONG CASES

1. Gummatous disease of testicle.
2. Lumbar abscess.
3. Synovitis of knee. Congenital syphilis.
4. Mass of hard enlarged glands in the neck of a man aged 54, probably due to a malignant disease in throat.
5. Charcot's disease of hip.
6. Tuberculous disease of testicle.
7. Hammer-toe and sebaceous cyst on scalp.
8. Old osteomyelitis of tibia with genu valgum.
9. Sarcoma of forearm.
10. Adenoma of thyroid.

TABLE 4.—THE ARRANGEMENT OF THE EXAMINATION IN SURGERY

			Paper	Clinical	Surg. Anatomy and Apparatus	Oral Surgery and Pathology	Oral Surgery and Pathology
Section A—							
Mr. Pollard	University College	Examine	1, 6, 11, 16, 21,	2, 7, 12, 17, 22,	3, 8, 13, 18, 23,	4, 9, 14, 19, 24	5, 10, 15, 20, 25,
Mr. Waterhouse ..	Charing Cross....		26, 31, 36, 41	27, 32, 37, 42	28, 33, 38, 43	29, 34, 39, 44	30, 35, 40, 45
Section B—							
Mr. Lane	St. Mary's	Examine	2, 7, 12, 17, 22,	3, 8, 13, 18, 23,	4, 9, 14, 19, 24	5, 10, 15, 20, 25,	1, 6, 11, 16, 21,
Mr. Ballance	St. Thomas		27, 32, 37, 42	28, 33, 38, 43	29, 34, 39, 44	30, 35, 40, 45	26, 31, 36, 41
Section C—							
Mr. Dunn	Guy's	Examine	3, 8, 13, 18, 23,	4, 9, 14, 19, 24	5, 10, 15, 20, 25,	1, 6, 11, 16, 21,	2, 7, 12, 17, 22,
Mr. Waring	St. Bartholomew's		28, 33, 38, 43	29, 34, 39, 44	30, 35, 40, 45	26, 31, 36, 41	27, 32, 37, 42
Section D—							
Mr. Spencer	Westminster	Examine	4, 9, 14, 19, 24	5, 10, 15, 20, 25,	1, 6, 11, 16, 21,	2, 7, 12, 17, 22,	3, 8, 13, 18, 23,
Mr. Knaggs	Leeds		29, 34, 39, 44	30, 35, 40, 45	26, 31, 36, 41	27, 32, 37, 42	28, 33, 38, 43
Section E—							
Mr. Haslam	Birmingham	Examine	5, 10, 15, 20, 25,	1, 6, 11, 16, 21,	2, 7, 12, 17, 22,	3, 8, 13, 18, 23,	4, 9, 14, 19, 24
Mr. Hutchinson ..	London (Hosp.)...		30, 35, 40, 45	26, 31, 36, 41	27, 32, 37, 42	28, 33, 38, 43	29, 34, 39, 44

The candidates bearing Nos. 1, 6, 11, 16, etc., may come from any medical school except University College or Charing Cross.
" " " Nos. 2, 7, 12, 17, etc., " " " " " " " St. Mary's or St. Thomas'.
" " " Nos. 3, 8, 13, 18, etc., " " " " " " " Guy's or St. Bartholomew's.
" " " Nos. 4, 9, 14, 19, etc., " " " " " " " Westminster or Leeds.
" " " Nos. 5, 10, 15, 20, etc., " " " " " " " Birmingham or London (Hosp.).

SHORT CASES (MEN)

1. Enlarged bursa over olecranon following injury.
2. Old osteomyelitis of humerus (when aged 21) in a man of 40.
3. Epithelioma of tongue with enlarged glands.
4. Bubonocele (large), man 39.
5. Hernia, inguinal (age 73).
6. Small hydrocele with some thickness of epidermis (boy 16), probably tubercle.
7. Specific ulceration of palate (age 38).
8. Impacted intracapsular fracture neck of femur (age 33).
9. Iliopsoas abscess with spinal caries (age 18).
10. Charcot's disease of hip (age 37).
11. Sebaceous tumors of scalp.
12. Varicocele and cyst of opposite epididymis (age 33).

WOMEN AND CHILDREN

13. Child, aged 3, very bad congenital talipes equinovarus.
14. Angular curvature of spine, child aged 9.
15. Child of 9 with specific (congenital) osteitis and periostitis and ulceration of neck.
16. Child, aged 7, old injury to elbow, fracture of internal condyle.
17. Specific ulcer of leg (age 52).
18. Enlarged glands of neck, secondary to epithelioma of upper jaw (age 42).
19. Large malignant tumor of breast (age 58).
20. Enlarged gall-bladder (age 43).
21. Enlarged gall-bladder (age 46).
22. Tuberculous glands of neck (age 34).

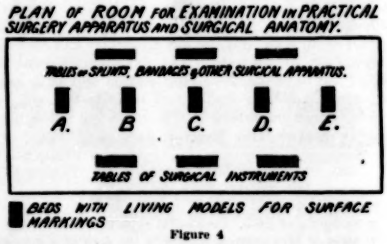
PLAN OF ROOM FOR EXAMINATION IN PRACTICAL SURGERY APPARATUS AND SURGICAL ANATOMY.
TABLES OF SPLINTS, BANDAGES & OTHER SURGICAL APPARATUS.
A.
B
C.
D.
E.
TABLES OF SURGICAL INSTRUMENTS
BEDS WITH LIVING MODELS FOR SURFACE MARKINGS

Figure 4

On the completion of the clinical examination of each batch of five men, they are sent to a table to examine specimens of surgical pathology under the microscope, two of which are given to each. The report on these specimens is made in writing on a form specially provided and taken into account on the next day at the surgical oral examination. A list of the specimens shown is handed to each examiner. The candidates are summoned to the building in batches of five up to half time, and as they finish they wait in a room by themselves until at half time the remainder of the candidates who have been summoned in one batch have arrived and have been assigned to another room. The first half are then allowed to go. There can be, therefore, no communication between those men who have been examined and those who are to be examined. The patients, who are each paid a small fee, are then dispatched to their hospitals. At 7:45 the examiners begin an examination in surgical anatomy and apparatus. During the interval my attendants rearrange the room and the examiners return to find it as shown in Figure 4. On each of these beds there is a man undressed, who is utilized as a model for surface marking. On tables arranged along the room there are bandages and splints and instruments of all sorts. The candidate is examined by one examiner and assessed by the other, and he may be asked to apply a bandage or a splint, to mark out the course of an artery, vein or nerve, to explain how he would perform a certain operation, marking out with chalk the flaps or the course of the incision, etc.; he is asked to choose from the trays the instruments he would use and to show how he would use them; to show by means of glasses and diagrams how he would test a patient's eyesight, etc. This examination lasts in each case for fifteen minutes and at the end of that time the examiner and his assessor award the mark. The examiner who has been assessing the first candidate takes the next candidate and they alternate through the evening. The same forty-five men are examined in this manner up to 10:00 p. m. The marks are all handed to me and I enter them in the report book. During the evening each pair of examiners will have also handed to me the marks on the written papers of the candidates being examined on that day. The next day the same forty-five candidates are summoned in batches of five at twenty minutes' interval, to the Royal College of Surgeons, where they are examined *viva voce* on general surgery and pathology. Each table, at which a pair of examiners sits, is covered with pathologic preparations from the celebrated Hunterian Museum of the college, and these preparations are used as a text on which to examine the candidates. This examination commences at 5 p. m., and each candidate goes to two pairs of examiners for ten minutes each. It will be seen, therefore, in Table 4, that Candidate 1 is examined by Section A for the paper, by Section E for the clinical part, by Section D for the surgical anatomy, by Sections C and B at the two pathologic tables, and the other candidates are distributed in a similar manner over the five sections. At 7 p. m. the examiners break off, when the marks of the thirty candidates whose oral examination has been completed are entered by the secretary. The examiners sit round a table, and the secretary calls out the numbers and marks from a book so that they may be checked by the examiners from their own records, and the chairman then declares those who have passed and those who have failed. The candidates are personally informed of the result of their examination: those who have passed sign the by-laws of the college and are then formally introduced into the examiner's room, where they are congratulated by the chairman and informed that they have satisfied the examiners. The examiners then proceed with the examination of the remaining fifteen men, which takes another hour, and at the end of that time the marks are called out again and the successful candidates are admitted in the same way as were the first batch.

The examiners leave at 9 p. m., having in the two days completed the examination of forty-five candidates. One hundred and eighty candidates are, therefore, examined in eight days—four pairs of two days. The surgery paper is written on a Friday and the pairs of days are usually Monday and Tuesday, Thursday and Friday, thus giving intervals to the examiners, not only to read the papers but to see their private patients. The hour of commencing each day being 4:30 or 5 as the case may be, moreover, gives the examiners considerable freedom.

For all subjects we allot the early numbers to the provincial candidates, so as to minimize as far as possible the expense of staying in London. A provincial candidate need not stay more than a week in London even if he is taking the whole examination, but if he is taking one or two subjects only four or five days will be sufficient.

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MIDWIFERY

There are nine examiners in midwifery of whom eight take part in each examination, the one not employed being determined by rota. They are arranged in pairs, as usual called E, F, G. H. The same system is adopted as in the case of medicine, that is, the examiners at E read the paper of No. 1 and examine him in midwifery, while Section F takes his oral in gynecology. Section F reads the paper and takes the midwifery oral of No. 3, while Section E examines him in gynecology. In the same way Sections G and H deal with the even numbers. The office arrange in the same way that no students are examined by E, F, G and H respectively, who come from the hospitals to which the examiners are attached.

The paper on midwifery and gynecology is on a Thursday, i. e. between the medicine and surgery papers, and the oral examination is held on the same evening as the medicine examination, but from 7:00 to 9:40 p. m. The tables at which the examiners sit are furnished with all sorts of obstetric instruments, with manikins and various mounted and preserved specimens (see Figure 2).

Four candidates are called in at a time, one to each table. They are all examined for ten minutes on midwifery; at the end of this period the candidates at E and F change with one another, as do those at G and H, and they are all then examined in diseases of women for ten minutes, after which they leave the room and a fresh batch is brought to the tables.

By 9:40, therefore, thirty-two candidates will have been examined, and the examiners then call over their marks to me. I enter them and declare the results. The candidates who are summoned to return at 9:40 are then personally informed by a member of the office staff if they have been successful or not.

Now, one criticism which will probably be made is that the time of the examination is all too short, but I will answer that criticism by saying that the examination is not competitive but a test of fitness to practice.

The examiners do not ask abstruse or out-of-the-way questions but examine on straightforward matters that everyone ought to know. They do not expect an absolute diagnosis but they judge of the common-sense way a man goes about his work, of the questions he asks his patients, of the reasons he gives for forming his opinions, of the tests he uses and the methods he employs.

It is surprising how much an experienced examiner, and even an inexperienced man who has worked for a short time with an old examiner, can extract from a candidate in fifteen minutes, and it must be remembered, too, that, as I have emphasized, all our examiners are engaged in teaching and know what may fairly be expected of a student who has reached this stage in his career.

It may be interesting to state what it costs to work a final examination in medicine, surgery and midwifery for two hundred men.

The examination fees come to the following amounts:

Medicine	£700	
Surgery	850	
Midwifery	380	
		£1,930
Eight days' medical patients		30
Four days' surgical patients		30
Conveyances		10
Extra attendants and model men		15
Total		£2,015

In addition there is, of course, the maintenance of the Examination Hall, the general organization expenses, including the salaries of the secretary and office staff and attendants.

Be it remembered that we have no state grant in aid; we have to depend entirely on the fees for our diplomas. These fees are large—£42 ($210)—part of which is paid for the final examination. These fees—£42 ($210)—are distributed over the examination: thus $52 is paid for the first examination; $52 more, a year and a half later for the second examination; and $105 at the end of the curriculum for the final examination. No doubt this will seem a large sum to pay for a license to practice, and it is obvious that with the fees paid in this country for the degree of M.D. it would be impossible to conduct an examination on the scale such as I have described. It would be necessary either that the fees payable for the M.D degree should be increased greatly, or that the state should provide funds for the conduct of a satisfactory practical examination. In spite of these high fees and of our heavy percentage of rejections, probably to a large extent because of the high standard, the men come to us for our diplomas even when they are also taking university degrees.

Now, I wish to call attention to a very interesting fact:

Although every university degree and every diploma granted by the royal colleges carries with it precisely the same privileges with regard to registration as a medical practitioner, yet it is the practice of a large majority of those who are seeking degrees of doctor of medicine at the universities in England to take also the diplomas granted by the royal colleges. This does not apply to Scotland or Ireland with their corresponding colleges of physicians and surgeons. For example, of the graduates in medicine of the universities of Oxford and Cambridge, no less than 82 per cent. take our diplomas; of the University of London 84 per cent. take our diplomas; while of the total university medical students in England, 67 per cent. enter for the examination for our diplomas.

All these men have, therefore, to undergo twice over a final examination in medicine, surgery and midwifery—one by their university, and secondly by our board, and they have to pay a comparatively heavy fee for our diplomas. It will naturally be asked why they do so. There are various reasons. First, our diplomas are known throughout the United Kingdom for the practical nature, the fairness and the high standard of the examination and they have a well-established reputation and prestige.

Then in some cases, although we require a full five years' curriculum, our diplomas can be obtained a little earlier than the university degree, but this is by no means general. Another reason, I think, is that many university men look forward to obtaining our higher diplomas—our Fellowships which are almost essential for consulting practice in England, and they, therefore, wish to become our licentiates and members as a stepping-stone to those diplomas.

SUMMARY

We can examine at one time as many as 250 candidates. In the case of chemistry they would all write their paper on one day; they would be examined in the laboratory in three batches of eighty men each, leaving a few for a fourth batch. These four batches would take two mornings and two afternoons.

In physics the candidates would be examined at the rate of sixteen men an hour in the practical part, or a total of sixteen hours spread over three days.

In biology we take only thirty-six candidates a day for the oral part, and therefore the examination would occupy seven days.

For the second examination in anatomy and physiology we examine forty-eight candidates a day in the oral part, and we should therefore take five days and a part to get through this number.

As a matter of fact, however, we do not have such large numbers for the first and second examinations, because many of our candidates obtain exemption from these examinations by passing in the subjects at their universities.

For the final examination the papers in medicine are written on a Tuesday and Wednesday and the clinical and oral part commences on the following Saturday when twenty-four candidates are taken. We should examine four days in the next week when ninety-six more candidates are taken, and four days in the week after, when again ninety-six candidates would be examined, leaving thirty-four to be taken in one and one-half days in the following week, so that in three weeks from the date of the paper we should finish the whole of the candidates.

In midwifery we examine thirty-two candidates a day, therefore in eight days—four days a week—we should complete the examination and, as the paper is written on a Thursday and the first oral night is on the following Saturday, it takes exactly a fortnight.

For surgery, the paper is written on a Friday and the oral commences on the following Monday. We take ninety candidates in four days in the following week and ninety candidates in the week after that, and the remaining seventy candidates take another four days, two of which would be short, so that in three weeks from the date of the paper the examination is finished.

Take an individual candidate; he will have two papers of three hours each in medicine, one of three hours in midwifery, and one of three hours in surgery. He may be summoned to attend for his oral examination on any of the days appointed for the practical and oral parts. On the day that he is summoned to attend for medicine and midwifery he is examined in clinical medicine for half an hour, in practical and oral medicine for half an hour; in midwifery for twenty minutes; in surgery he would be summoned for another day for half an hour's clinical examination and fifteen minutes' examination in surgical anatomy and apparatus, and for twenty minutes' examination in pathology and surgery on the following day, making a total of sixty-five minutes for his surgical examination.

An examiner in medicine would therefore be occupied for four and one-half hours on each of ten and one-half days and would receive in fees £110 ($550); an examiner in midwifery would be engaged on seven days for two hours and forty minutes each, and would receive £60 ($300); and an examiner in surgery would be engaged on ten days for five and one-half hours and four hours alternately and for two shorter days, and would receive in fees £106 ($530).

At any rate our examinations are practical and thorough, and therefore I consider that our license has a peculiar value, namely, that the mere fact of a man having to undergo a series of examinations before such a number of strange examiners, and away from the surroundings and associations of the institution in which he has been educated is in itself a test of his ability to act in emergency, to adapt himself to circumstances, and to prove himself capable of rapid resource.

It is now thirty-four years since I first entered the office of the Royal College of Surgeons, and for twenty-four years I have been secretary of the Conjoint Examining Board of the two royal colleges. During these years the examinations and the organization have greatly developed. I have seen the practical examinations of other bodies—indeed, in addition to our own examinations the management of a considerable part of the examination for the degree of the University of London, as well as the examination for surgeons for H. M. Navy and for the Indian Medical Service is in my hands. Naturally I have acquired certain convictions as the result of this experience and have contemplated how an ideal system of state examination should be framed, where no vested interests stand in the way. May I conclude by shortly stating the outlines of such a scheme?

I. Assuming that medical education is on a sound and efficient basis, the state board should be representative of the professorial staffs of the medical schools and hospitals.

II. Should the board be a large one, an executive committee consisting of six, or at the most eight, members of the board, should be appointed which should be entrusted with the administration of the examination on conditions laid down by the state board.

III. The examiners should only be elected from physicians and surgeons who are engaged in active clinical instruction.

IV. The following conditions should be observed:

1. There should be not less than ten examiners in medicine, in surgery, and in midwifery.
2. They should be well distributed amongst the staffs of hospitals where clinical instruction is given.
3. The appointments in each subject should be so arranged by rote that not more than two examiners in each subject should go off in any year.
4. The appointments should be for a period of five years but subject to annual reelection.
5. A new examiner should be paired with one who has examined for not less than three years.
6. The pairs should be changed every two examinations.
7. The examinations should be held four times a year to keep the numbers in moderation and to prevent too great a penalty for failure.
8. An official should be responsible for all details of organization with a sufficient staff. He should have a free hand to organize the examination under the supervision of the executive committee.
9. Punctuality, regularity, and compliance with the conditions laid down by the executive committee must be absolutely insisted on.
10. A high standard should be set from the commencement, for unless the examination standard is a high one the teaching will not be thorough and the confidence of the profession and the public will not be gained.
11. In the conduct of the examinations the system described for our surgery should be adopted, viz.: five pairs of examiners, each pair in turn taking some part of each candidate's examination.

V. Should there be numerous states in the country, it would conduce to economy, efficiency and equality of standard for such states to be divided into zones, two, three, four and even five states combining in one conjunct state board according to their geographic situation.

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VI. There would thus be groups of state boards, between which there should be complete reciprocity.

VII. In order to justify reciprocity by the mainfenance of equality of standard there might be a board of inspectors consisting of a representative of each group, whose duty it should be to visit the examination of every board in turn. They should report from time to time to all the constituent boards, which would then decide whether reciprocity should be continued with any particular board.

VIII. A scheme such as this can be started by a small number of states, and if found to work satisfactorily, can be extended as others become prepared to fulfil the necessary conditions.

I realize only too well that in attempting to explain the organization of the Conjoint Board, I may have failed to convey all I could wish, for it is difficult to express in terms all the hundred and one little points which go to build up a complete system. I can only say that it will be a great pleasure to me to supplement or explain any details of our examinations by conference or correspondence. If in any small degree I have fulfilled the mission which you expected of me as the representative of those two great and ancient corporations which form that board, I shall feel no little pride in having taken a small part in assisting to develop the system of medical education and examination to a position worthy of so great and enterprising a country.

PARETIC PATIENTS SENT TO PRISON

PAUL E. BOWERS, M.D.
Physician in Charge Indiana Hospital for Insane Criminals
MICHIGAN CITY, IND.

The object of reporting this case is to point out the imperative need of early diagnosis of mental disease and to cite an example of the wrongs suffered by the insane because mental disorders are overlooked.

Every prison surgeon has, no doubt, met, in his routine examination of prisoners, persons who properly belong in the hospitals for the insane. My statements apply to only those individuals who are sent to penal institutions because they have been convicted wrongfully of some statutory offense which was the symptomatic expression of an unrecognized mental disorder; they do not apply to those persons who are instinctively criminal and whose constitutions are so degenerate that they frequently develop active psychoses when brought into conflict with the law.

It is of paramount importance that the general practitioner should be able to diagnose mental disorders in their incipient stages, that appropriate custodial and medical treatment may be early instituted. To do this it is necessary that the family physician should be acquainted, not only with the common mental symptoms of insanity, but with the crimes and misdemeanors that are attendant on mental diseases. Crimes are frequently a pathognomonic part of the symptom-complex; and if this fact were properly appreciated many heartaches and family disgraces would be averted.

The motives and circumstances connected with pathologic crimes generally bear the impress of mental derangement; but this is not always the case, for some of the offenses of the insane show evidence of careful planning and deliberate cunning in their commission.

Without entering on a discussion of the complex and weighty problem of criminal responsibility, I shall give a brief summary of the crimes and misdemeanors common to the insane.

First in rank, as to numbers and seriousness, are the offenses of the epileptic group. The pathologic criminal offenses common to this class are homicides, attempts at homicide, arson, rape and petty thefts. These violations of the law are frequently committed by the epileptic in the automatic states occurring before or following a paroxysm. Such acts seem to be, quite often, the result of coherent and conscious volition; but in reality consciousness is blotted out; and when the normal status of the individual is regained there is amnesia for any events that may have occurred during these periods. In the conditions of psychic epilepsy consciousness is, many times, retained, but responsibility is practically destroyed or inert, owing to the stimuli of overpowering influences or obsessions with paralysis of the inhibitory faculties.

Pyromaniacs have been frequently found to suffer from psychic epilepsy, and often can give no reason for their acts except that they were possessed with an irresistible impulsion to fire public property. In some patients an epileptic furor takes the place of a seizure proper; at which times violent deeds are occasionally committed. This type of the epileptic neurosis must always be considered when some apparently normal person commits an outrageous act without any assignable cause. Clouston has said: "Murder by an epileptic should be looked on as being as much a symptom of his disease as is larceny by a general paretic."

Second in order, the paranoic group of mental diseases furnishes us with a large quota of pathologic crimes. Persons suffering with this type of mental alienation are given to homicide, homicidal attempt, blackmail, and, on rare occasions, suicide is committed as a result of profound depression, growing out of their persecutory delusions.

Of this same class are the self-appointed martyrs who end their lives by suicide when laboring under delusions controlled by religious and philanthropic ideas.

The crimes of the manic-depressive group are infrequent, and this is especially true of the manic stage, as the extreme psychomotor activity interferes with the accomplishment of any definite act. Suicide is, however, the occasional termination of the depressive phase. Parents guided by a delusional and misguided sympathy have been known to murder their children during the depressive phase of this psychosis, to save their offspring from purgatorial fires.

The crimes of senile dementia, which are often a part of the symptom-complex, are attempts at suicide, foolish thefts, acts against public decency without any reason or purpose whatever, such as the exhibition of their genital organs, etc. The old and respected citizen whose life for forty years or more has been exemplary commits rape on a young child, owing to a lack of moral inhibition and to impulses resulting from a hyperexcitation of the genetic impulses.

The crimes of arteriosclerotic dementia are practically of the same character, with the addition of homicide and arson. Involutional melancholia usually appears at the time of the menopause in women, and in men after the forty-fifth year. The principal characteristic of this psychosis is profound depression. There are developed, on this state of anxiety and apprehension, delusions of self-depreciation and debasement. The unfortunate sufferer from this disease often thinks he has committed the unpardonable sin, and frequently commits suicide to escape his mental torture.

The misdemeanors and crimes of dementia præcox are usually of a mild character; as destruction of furniture and clothing. The noothymopsychic ataxia,[1] the cardinal symptom of this psychosis, usually prevents the carrying out of any well-defined ideas. The catatonic form of this disease is usually accompanied by impulsive acts which are devoid of premeditation or malice. Homicidal attempts are frequently committed by those persons afflicted with the paranoid form dementia præcox.

The crimes of chronic alcoholism are of a sexual nature, as rape and sodomy. Petty thefts are common in Korsakoff's psychosis.

The borderline or psychopathic characters display many anomalies of mind and mood. Their psychologic tension is lowered; things are not as they seem; the mental perspective is distorted, trivial disappointments are magnified and are interpreted to be precursors of evil, often causing depressions ending in suicide. Anomalies of sexual instinct are common, as perversions and inversions, leading to abnormal sexual acts. Kleptomania and pyromania are frequent.

The crimes of imbecility are homicide, assaults, rape and petty theft.

The offenses of the paretic are seldom dangerous to life. Patients in the early stages of paresis commit foolish and absurd crimes, such as the theft of umbrellas, canes, etc. Magan recites the case of a paretic who asked the aid of a policeman to steal a barrel of wine. The rich patient particularly has been known to steal articles of trivial worth. The patient with the expansive type of this disease forges large checks, makes wild speculation in the market and undertakes impossible financial operations without any apparent knowledge of the quality of his acts.

The formerly highly respected citizen indulges in drinking and debauchery with lewd women; and his relatives in vain attempt to stop him in his newly determined career of vice.

In the following case the patient suffering from paresis was sentenced to prison for a term of one to eight years convicted of petty larceny. His crime was the theft of $2.50 from a saloonkeeper, at whose place of business he had been indulging too freely in intoxicants. His misdemeanor was simply an expression of his mental disorder, calling for hospital treatment instead of confinement behind prison walls; and, fortunately for him, Indiana has provided a hospital for insane criminals to which he can be transferred, that he may receive treatment.

In the majority of the state prisons, prisoners of this type languish in cells without appropriate custodial and medical treatment, and are a disturbing factor in the maintenance of prison discipline. I admit that occasionally insane criminals are transferred to civil hospitals for the insane, but this procedure is dangerous as well as unsatisfactory.

History.—The patient was a butcher, aged 36, born in Berlin, Germany. He received a common school education; sustained no serious illness or injuries during childhood. He used tobacco and alcoholics to excess since about 18 years of age. All venereal history was denied. There was, however, a slight scar on the glans penis. The Wassermann test or cytologic examinations were not performed. History was obtained from prisoner, Jan. 5, 1912, but his mental state was such as to preclude the possibility of securing reliable data.

Physical Examination.—The patient was fairly well nourished; plenty of adipose tissue; muscles were soft and flabby. Height, 5 feet, 7 inches; weight, 165 pounds. The respiratory system was normal. As to the cardio-vascular system, the heart-rate was slightly irregular; some slight sclerosis of superficial vessels. The digestive system was normal. In the glandular system, some enlargement and induration of the inguinal epitrochlear and cervical glands was noted. The osseous system appeared to be normal. Examination of the genito-urinary system showed a slight scar on glans penis. Urinalysis was negative.

Neurologic Examination.—General incoordination was present; Romberg sign present. Power of hand-grips was diminished; general lack of muscular tone. The stereognostic sense was defective. Speech was defective; the patient stumbled over test phrases, speaking in a slow, hesitating and monotone manner. The pupils were unequal in size; the right was larger than the left; both were irregular and out of line. Consensual and sympathetic reflexes were absent. The pupils did not respond to light; accommodation reflex very sluggish. The abdominal reflex was present; cremasteric and patellar reflexes were absent. No ankle-clonus was present; the Babinski sign was present. Pain sense was defective; pin-pricks, after skin was stimulated, were felt five seconds later on anterior surface of lower limbs. Some areas of anesthesia were found on posterior surfaces of limbs and trunk. The heat, cold and color senses were defective; vision, 5/20. Audition was normal. Olfactory sense, defective. Motor reaction was slow; only thirty dots made in ten seconds.

Mental Examination.—The patient was untidy in personal appearance; clothes were not properly buttoned, and stained with food. Consciousness was clouded; he was disorient as to time, place and person. As to the emotional status, a considerable amount of euphoria was present. The patient was pleased with himself and his environment. Insight was lacking; he said that his mind was all right. Voluntary speech; he talked disconnectedly about his environment and the persons near him. Memory for both past and present events was nil. The Masseleon and Zeihn tests were not attempted by the patient. No hallucinations or delusions were present. Mathematical calculations of simple multiplication and addition were 60 per cent. correct. General information and moral sense were lacking. In the word association test, average reaction time was nine seconds.

Diagnosis.—The case, at the present time, presents the typical symptoms of paralytic dementia, to which there has not yet been added a paralytic insanity; but delusions may appear later on in the course of the disease. The general clouding of consciousness, confusion of ideas, dilapidation of thought, progressive failure of memory, reason and judgment, coupled with the results of neurologic examination make a diagnosis of general paresis easy.

To allow the cases of such patients to go undiagnosed, permitting their incarceration in prison, reflects seriously on the diagnostic ability of the profession.

1. The term "noothymopsychic ataxia" is a specifically coined descriptive word employed by Dr. Irwin Stransky, an alienist of Vienna, to designate emotional ataxia and to explain its mechanism indicating a lack of coordination between the intellectual and emotional spheres.

A Chinese View of the Difference Between Whisky and Opium.—Mr. Ng Poon Chew, editor of the *Chung Sai Wat Po*, the Chinese American daily paper of San Francisco, recently said, speaking before the City Club of Chicago: "The opium question is a very, very serious one. It is just like the whisky question in this country, except that in China we have the will to abolish the opium, but by reason of limitations by other foreign countries we have not the power, whereas in America you have the power to abolish the whisky but you do not have the will. There is also this difference between opium and whisky: Whisky arouses a man's animal instincts and makes him an unreasoning brute; opium deadens his sensibilities and lessens his vitality and transforms him into a living corpse. An American whisky drinker goes home and kicks his wife; an opium fiend goes home and his wife kicks him. I wonder if that is the reason that the great American people prefers whisky to opium."

AN EPIDEMIC OF SORE THROAT DUE TO A PECULIAR STREPTOCOCCUS *

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During the past three months there has been, and still continues, in Chicago an epidemic of sore throat that is unusually severe and characterized by complications strikingly different from those of other years. That it is generally prevalent throughout the city is attested by numerous physicians.

A streptococcus presenting certain peculiar characteristics is found in practically all cases. A number of cases have terminated fatally. In view of these facts, it is thought wise to make a brief preliminary statement at this time concerning certain clinical and bacteriologic features of the disease.

The attack usually begins suddenly with or without a chill. The fever, the muscular pains, the prostration and the constitutional symptoms are out of all proportion to what one would expect from the amount of local involvement. The pulse is relatively slow. The leukocytes are only moderately increased. The throat presents a diffuse redness; there is much secretion of mucus. The tonsils are always infected and the crypts filled with an exudate; and a grayish membrane may spread over a large part of the tonsil (closely resembling diphtheria); only occasionally does ulceration take place. The acute symptoms often subside in a few days. At the end of a week or ten days, however, the patient, instead of recovering completely, may suddenly become worse. The cervical glands may become very large, but usually do not suppurate, or the neck may become tender and the act of swallowing very painful; and the clinical picture suggests septicemia. Blood cultures are most always negative where glandular involvement is pronounced, while at the outset in the latter group of cases they yield streptococci. The visceral complications occur most often in the group of cases which have little or no glandular involvement, but marked constitutional disturbances. Otitis media occurs quite frequently, but suppurative processes in the mastoid and other accessory sinuses are relatively uncommon.

Bacteriologic examinations have been made in many cases. Among the complications represented are, suppurating lymph-nodes, empyema, arthritis, erysipelas, pulmonary abscess, otitis media, brain abscess, meningitis, septicemia, peritonitis, puerperal sepsis, etc. From the throat and tonsils and from the secondary lesions just indicated, in practically all cases and usually in pure culture a streptococcus possessing the following features has been found: Morphologically in the smears from the throat and the exudates, it occurs in short chains and often in pairs. The cocci, which commonly occur in very large numbers, are spherical, but appear in twos in the chain. They are strongly Gram-positive and are surrounded by a definite capsule. The capsular substance is less abundant than that surrounding the pneumococci, does not indent between the pairs, as is the case in the latter, and is soon lost on artificial cultivation.

The colonies on blood-agar plates are larger and more moist than those of the common hemolytic streptococcus (*Streptococcus pyogenes*); at times there may be a faint greenish tint on transmitted light. The zone of hemolysis is relatively narrow and begins immediately around the colony, and its outer margin is often indistinct. The growth on the surface of blood-agar slants is abundant, raised, and moist, but does not present the mucoid appearance of the *Streptococcus mucosus*. In broth, uniform turbidity is produced and milk is always acidified and sometimes coagulated. Inulin is not fermented. The cocci are slightly bile-soluble and autolyze slowly in sodium chlorid solution.

The organisms possess a high degree of virulence, readily killing guinea-pigs, mice and rabbits in from twelve to twenty-four hours from septicemia and serositis following intraperitoneal inoculation of small quantities. Animal passage increases strikingly the capsular substance, and the growth becomes more profuse and mucoid.

Autopsies have been made in four cases of this infection. In all there was acute serofibrinous peritonitis, in the exudate of which pure cultures of this streptococcus were obtained. In three, there was acute fibrinous pleurisy, in one acute pericarditis, and in three the cocci occurred pure in the heart's blood. Endocarditis was not found. The atrium of infection in three cases was clearly the tonsils or the throat. In the remaining case, it appeared to be a localized fibrino-purulent bronchitis following a sore throat.

To summarize, these infections are characterized by a sudden onset with severe prostration, by glandular enlargement, and frequently by serious complications. The organism, isolated, is an encapsulated hemolytic streptococcus of high virulence. It appears to occupy a position between the ordinary hemolytic streptococcus and the *Streptococcus mucosus*. It is not a pneumococcus. The increase of the capsular substance on animal passage and its loss on artificial media suggest that the capsule and high virulence are the result of frequent human passage and may serve to explain the unusual tendency to complications and the general severity of the disease.

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THE CLINICAL USE OF CARBON DIOXID WITH OXYGEN

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As the result of an immense amount of investigation on the part of physiologists, both in America and in Europe, it has been shown that carbon dioxid is not merely a waste product of the body. On the contrary it is one of the most important of the body's hormones, exercising a regulative influence on the action of the heart, on the tonus of blood-vessels, and especially on the respiration. In fact, breathing in ordinary life is practically dependent on the stimulation afforded to the respiratory center by the carbon dioxid brought to it in the blood. In the demonstration of this exceedingly important fact the Italian school of physiologists has played an important rôle. In particular, the late Professor Mosso of Turin, in his important studies on mountain sickness, was led to conclude that this condition was essentially due to a decrease in the carbon dioxid of the body, a condition to which he first gave the name of "acapnia." Although, as regards mountain sickness, this view has been vigorously combated by other physiologists, Mosso's experiments, demonstrating that acapnia induces a lowering of arterial pressure and failure of respiration, have proved of the utmost impor-

tance as the starting-point for the more recent work of others in this field. Especially deserving of mention are the investigations of Yandell Henderson on acapnia as a factor in shock. His observations are too well known to require detailed recital here.

After reading Henderson's papers I was led to consider the practicability of utilizing mixtures of carbon dioxid with oxygen for the purpose of stimulating the bulbar centers in those cases in surgical practice in which, owing to the effects of chloroform or ether or to operative trauma—or to a combination of these causes—the automatic activity of these centers is temporarily paralyzed. My experiments have shown that in carbon dioxid properly diluted we possess a therapeutic agent of extraordinary potency.

At the outset of my investigations I experimented on animals. By means of the single or combined action of nitrites, chloroform, and morphin, failure of respiration was induced. The animals were then made to inhale a mixture of oxygen with various percentages of carbon dioxid—from 10 per cent. to 30 per cent. In every case there was an almost immediate return of the breathing and the effects of the inhalation were found to last for some time after it was discontinued. I then tried the administration of these gas mixtures to patients who, because of trauma or extensive and prolonged operation, had sunk into a partially or completely comatose state. The effects were at times brilliant, particularly in those cases in which the breathing had become shallow, irregular, or of the Cheyne-Stokes type. With mixtures of from 5 to 20 per cent. of carbon dioxid in oxygen the depth of breathing and the regularity of the rhythm was notably improved. The most satisfactory results were obtained with a mixture containing 15 per cent. of carbon dioxid. In cases which exhibited Cheyne-Stokes respiration, the periodical rhythm was immediately stopped and normal breathing was not only restored, but continued for some time after the inhalation was ended. In such cases not only was respiration improved, but there was a marked improvement in the condition of the circulation. The disappearance of cyanosis was one of the most striking features.

It is now nearly two years since the publication of my first article on this topic.[1] During this time my method has been continuously employed in the surgical clinic in Florence. Professor Burci, general director of the clinic, has in fact so strong a faith in its efficacy that he has made it a standing order that, prior to every operation, a gasometer containing a mixture of oxygen and carbon dioxid shall be prepared, and shall be at all times during the operation available for the immediate use by the assistant administering narcosis. It is our custom not to wait until the patient has reached a condition of profound shock or respiratory paralysis, but on the contrary, as soon as the slightest tendency to failure of respiratory or cardiac function appears, to administer immediately inhalations of the gas mixture. A rapid return of normal heart action and breathing is the almost invariable result. The best results, as might be expected, are obtained when the condition of shock has not progressed too far, although even in the latter condition strikingly beneficial results are obtained. The number of cases thus treated during the past two years at the surgical clinic of the Florentine university now amounts to several hundred. In no case have we observed any ill effects from the treatment. On the contrary, in several traumatic cases in which, under chloroform, breathing had entirely stopped, we have observed a prompt return of practically normal conditions. As evidence of the success of this procedure I would particularly refer to the paper published on this subject by Professor Marchetti,[2] head surgeon at the Hospital of Santa Maria Nuova in Florence, and that by Dr. Cresenzi,[3] assistant at the Florentine University Surgical Clinic.

It will perhaps be of some interest to refer here to a case of a patient recently treated in the surgical clinic by Professor Stori and Dr. Abetti. It was a case of suicide by hanging. Prolonged artificial respiration, inhalations of oxygen and hypodermic stimulation had not given the slightest result. The case was practically given up as hopeless when it was suggested that the carbon dioxid oxygen mixture should be administered. After a few minutes' inhalation of this mixture spontaneous respiration returned.

This method has also proved of service in the treatment of medical cases, particularly in cases of profound asthenia due to toxemia. The administration of carbon dioxid oxygen-gas has proved an effective substitute for the peripheral stimulation ordinarily used. Particularly in those cases in which Baccelli's method of administering oxygen would ordinarily be used, we have found that the use of carbon dioxid with the oxygen by stimulating respiration increases the oxygen absorption.

Our observations in the Florentine surgical clinic with this method seemed to afford an explanation to some extent of the good effects obtained in surgical practice from the method of narcosis with artificially reduced circulation. It seems probable that the remarkable rapidity with which patients subjected to narcosis under this condition recover consciousness, as observed by many authors, is due to the sudden return to the general circulation of a large amount of blood rich in carbon dioxid when the lower limbs are unbandaged. Following up this suggestion we have found that the use of a gas mixture containing from 10 per cent. to 15 per cent. of carbon dioxid after the completion of an operation is very effective in causing a prompt awakening of the patient. It seems also to tend to decrease the postchloroformal vomiting. This is doubtless referable to the rapid elimination of chloroform from the blood and tissues under the influence of the increased respiration induced by the carbon dioxid.

As our use of carbon dioxid and oxygen inhalations took its origin from the interesting experimental studies of Prof. Yandell Henderson on this subject, in America, it has seemed to me that it might be of interest to publish this brief résumé of our methods and observations in an American journal.

1. Levi, Ettore: Nota preventiva sulle applicazioni terapeutiche, nella pratica chirurgica e medica, di mischele il ossigeno e di anidriole carbonica. Accad. med. Rs., Firenze, March 16, 1910; Studi sull'azione fisiopatologica dell'anidriole carbonica, e sulle applicazioni terapeutiche, nella pratica chirurgica e medica, di mescele di ossigeno ed'anidriole carbonica, Rev. Crit. di' Clin. Med., 1910, Nos. 30 and 31.

2. Marchetti: Ueber die Anwendung der Gemische von Sauerstoff und Kohlensäurenanhydrid nach Dr. E. Levi in der Praxis der Chloroformnarkosa, Wien. klin.-therap. Wchnschr., 1910, No. 40, p. 961.

3. Cresenzi: Die Anwendung der Gemische von Sauerstoff und Kohlensäurenanhydrid in der chirurgischen Praxis, Wien. klin.-therap. Wchnschr., 1910, No. 40, p. 960.

Small-Pox Quarantine in Practice and Its Failure.—When we read the thoughtless expressions of antivaccinationists we often feel as if the best thing to do with them would be to leave them to their folly, but consideration of the statistics shows how unfair that would be. There are the minors who pay a disproportionate toll in such cases.—G. Dock in *Journal of Missouri State Medical Association.*

MATERNAL NURSING

THE RETURN OF MILK AFTER DISCONTINUANCE OF NURSING

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In the effort to reduce the mortality among infants, volumes have been written concerning the value of various methods of milk modifications. In turn, the proteids, the fats and the carbohydrates have received marked attention as the main factors in causing the serious illnesses of early life. Milk stations have supplied their part of the literature regarding the value of certified, sterilized and pasteurized milks in regard to relieving the morbidity among infants in the congested centers of our large cities. Recently the attention of civic workers has been drawn to the existence of a natural milk-supply that has been somewhat overlooked in the mad rush to supply a clean milk for the feeding of infants.

It is not necessary here to discuss the question as to whether there is an increasing inability on the part of mothers to nurse their babies. I feel certain, however, that the ease with which modified milk may be procured from stations of one type or another is a large factor in discouraging special effort to nurse a baby in the face of a lessening supply of breast-milk. The effort to secure an adequate supply of breast-milk is not made with the same frequency that formerly existed. The feeling of confidence in artificial feeding has materially decreased the pressure that physicians bring to bear on their patients to continue their efforts at nursing.

In the last edition of Holt's "Diseases of Infancy" appears this statement:

> **Among the classes of society where most of the maternal nursing is very poor, but where every facility can be afforded for the best artificial feeding, one should not be slow to adopt the latter in cases of doubt. Among the poor and ignorant, however, where artificial feeding cannot be carried on with anything like the same chances of success, all possible efforts should be made to increase maternal nursing as the most effective means of reducing infant mortality.**

Without discussing the first part of this statement, the truth of the second part is certainly admitted. Is this advice followed? Judging from the large number of mothers who present themselves at the Vanderbilt Clinic and at the milk stations with their children, weaned by the advice of the physician before the infants are 1 month old, it seems that the problem of maternal nursing is not well understood.

Supplemental artificial feeding is too frequently given to children during the first few weeks of life without informing the mother that it is merely a temporary procedure. This practice is all too common in the service of some of our large lying-in hospitals. The fact that the suckling by the infant is one of the main factors in producing the secretion of an adequate milk-supply is entirely overlooked. At times there may be a delay in the production of the milk-supply owing to the weakness of the suckling of the infant. In one case under observation the milk did not appear until the seventh day, and the full quantity required for the child was not in the breasts until the tenth day. The child, however, was given no artificial food, but was placed at regular intervals to the breast and boiled water given as required. In hospital services, if the infant is puny the breast of the mother may be excited to action by allowing an older and stronger infant to draw on the nipples at regular intervals until the milk flows freely enough for the weaker infant to continue the nursing.

During the first few weeks of the puerperium the maternal milk-supply undergoes many changes owing to the readjustment of the mother to the assumption of new duties in addition to taking up the old burdens in her more or less weakened condition. This is the most important time in the lactating period and the time when it is most important that assiduous attention be given to placing the infant regularly to the breast. This is the dangerous time when the milk-supply appears to be decreasing and when, above all things, the removal of the baby from the breast may make maternal nursing impossible. The best producer of mother's milk is the rhythmic recurrent action of the lips of the baby.

It is my desire to pay especial attention to the possibility of placing the baby back on the breast after it has been removed therefrom for a variable period of time. I must repeat that the best method of creating a maternal milk-supply is to secure the traction on the nipple by the nursing infant. Milk has been secured from the breasts of virgins through this means. Pediatric text-books give little space to this phase of maternal nursing. Pfaundler and Schlossmann say:

> **After nursing has been discontinued for a few days the secretion practically disappears; frequently, however, it happens that even after a longer pause it is possible to secure the return of the secretion.**

Ballou, Martin, Marfan, Quinsac and Bourier, from Budin's clinic, report many instances in which the maternal milk-supply had been recovered after the lapse of a few days to five months. The literature relating to the subject is singularly scarce considering its value in the care of mothers, especially of the poorer class.

As a basis for discussion of this neglected phase of maternal nursing I shall briefly cite a few typical conditions in which the mammary secretion was recalled after the babies had been taken from the breasts of their mothers and placed on various types of artificial feeding.

> **CASE 1.—B. O., first seen at the age of 12 weeks, had been taken from the breast because of vomiting. On the tenth day the attending physician stated that the milk was too rich and he placed the infant on artificial feeding. Under the care of three different physicians the child was given condensed milk, albumin water, beef-juice, and several proprietary foods, but there was no improvement. Marasmus finally came to be the diagnosis and death the prognosis. When seen the weight was 6 pounds and 14 ounces, a full pound below the birth-weight. There was projectile vomiting, small mucoid stools and peristaltic waves. As a case of spastic pyloric stenosis the child was put back to the breast while the artificial food was stopped. Briefly, the breast responded, the spasticity slowly lessened and the mother nursed her child for the rest of the first year of its life.**
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> **CASE 2.—T. O'S. similarly had a spastic pyloric stenosis and the mother's milk had been stopped because it caused vomiting. After six weeks the child came under observation and all artificial milk was discontinued. Within five days the breasts took up their function and the baby was successfully nursed for ten months.**
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> **CASE 3.—Baby D. had too powerful suction and the breasts of the mother were caking, so the baby was used as a pump to empty them. As a result of this abuse of nursing the baby's stomach was distended, vomiting occurred and the nipples of the mother became excoriated and ulcers, 2 cm. in diameter, appeared. This condition of the nipples rendered nursing impossible. Even with a nipple-shield bleeding from the ulcers occurred and the pain was too intense to allow even momentary nursing. The infant was taken from the breasts and placed on artificial food. The breasts were regularly emptied;**

fluids were decreased in the diet; the bowels were kept open and the supply of milk decreased. After four weeks of rest the ulcers were healed and the nipples adjudged to be in condition to resume their normal function. The infant was placed again on the breast. After each nursing a supplemental feeding was given for about six days. At the end of one week the full supply necessary for the sustenance of the infant had returned and the mother nursed the child for nine months.

CASE 4.—Mrs. M. was advised to take her child from the breast because of cracked nipples. After the lapse of ten days her baby was placed back on the breasts and nursing continued uneventfully. The supplemental feedings were discontinued two days after the return of the child to the breasts.

CASE 5.—Mrs. O'S. during the second week of lactation developed a painful breast which went on to abscess formation. As soon as seen, the mother was sent into a hospital where, unfortunately and contrary to the right of mother and child, the baby could not be admitted. The mother being thus suddenly taken from the child, artificial feeding was instituted. At the end of one month the mother with her scarred breast was released from the hospital. The baby was returned to the breasts, both of them, and the interval of nursing was regularly followed. At the conclusion of the effort at nursing a supplemental feeding was given the child. This extra feeding was gradually reduced and by the seventh day the baby's only source of nourishment was its mother's breast.

CASE 6.—Mrs. K., after having had one breast operated on for an abscess, was told that if the baby nursed from that breast the soreness would return. In consequence her child was kept at one breast which was not yielding sufficient milk, and the baby was stationary in weight. Though two months had elapsed the child was placed back on the scarred breast and the return of the milk was prompt, much to the gain of the infant.

With the proper treatment of breasts, abscesses of the breast should be rare, but after they have occurred and have received careful treatment with incision and drainage until the wounds are healed, there appears to be no sound reason for not permitting them to resume their normal function.

In a number of cases in which, as a result of fatigue, there was an apparent diminution of the milk-supply, the baby has been taken from the breast for a few days to enable the mother to secure a rest. The only precaution taken was to require the mother to express every three hours whatever milk she could through gentle pressure on the breast without undue traction on the nipple. In all these cases there has been a prompt return of the milk on resumption of breast-feeding.

Many mothers come to the milk stations with a lack of milk during the first month of the infant's life. For these mothers the giving of supplemental feedings for the night enables them to secure a better rest and after a week or two they are again able to nurse successfully during the entire twenty-four hours. The value of this form of mixed feeding has not been sufficiently appreciated. The continued nursing of the baby increases the maternal milk-supply and the artificial food may be gradually cut down in quantity until the breast yields the entire amount necessary to ensure the growth and development of the child. It is almost needless to state that the improvement in the youngster may be judged by the weekly gain in weight as well as the general reaction of the child to the ordinary routine of its life. Carefully supervised mixed feeding is a valuable adjunct in securing an adequate milk-supply during the first month of a child's life.

Artificial feeding during a siege of sore nipples will give the nipples opportunity to heal and there will be little likelihood of losing the milk-supply providing gentle massage is practiced at regular intervals. It is seldom necessary to keep the infant away from the breast for this purpose longer than two weeks. If the mother is careless and fails to keep up the practice of removing the milk regularly by massage it may take two weeks to secure the milk in its orginal abundance.

At times puerperal sepsis, influenza, moderate infections of short duration, may come to the mother, but these need not necessarily serve to separate the infant from its rightful milk-supply. The contagious diseases as diphtheria, scarlet fever, measles, etc., require the child to be taken from the breast. After quarantine has been raised, however, there should be another effort made to recall the mammary secretion. The most efficient method of reestablishing the function of the mammary glands is to have the child exert suction on the nipple. Massage is also very helpful. It is desirable to increase the dietary of the mother by the addition of sufficient food to supply the increased amount of nutrients that are to be taken by the infant through the milk. Milk, oatmeal and corn-meal form the most valuable adjuvants in producing a sufficiency of milk that is capable of nourishing the infant.

In variola, if the infant has been vaccinated and the breast of the mother is free from lesions, there is no practical reason for the routine discontinuance of the maternal nursing. Comby secured an adequate supply of breast-milk after an attack of scarlet fever lasting forty-four days. Marfan was successful after twenty-five days' cessation because of diphtheria.

There are times when the glandular activity is inhibited through disease, and under such circumstances the supply will not be reestablished. Naturally in those women whose breasts have been exhausted through the limit of activity of the glandular tissue it will be impossible to recall the milk for a long period of time. Under these conditions it is preferable to continue on mixed feedings, giving the breast-milk to the full extent of the potential breast-supply. Whether it is preferable to alternate the bottles and the breasts or to give a bottle after each nursing depends entirely on the circumstances attending each individual mother and child.

The extent to which the breasts may be developed through the action of nursing is well indicated by the experience of Budin, who had fourteen wet-nurses for forty weak children. At times he was able to secure a daily milk-supply of 2,840 gm. from one woman.

The rate at which milk returns to the breast after the cessation of its use is partially shown by the figures of Quillier, who estimated the daily amount of milk that was secured from the breasts of a woman after a month's disuse because of an abscess. On the first day, 20 gm. was obtained; 60 gm. on the second day; 90 gm. on the third day; 290 gm. on the eighth day. This serves to show the necessity of persistence in the application of the infant to the breast in order to secure an adequate milk-supply in the breast.

In the cases of puny infants, when it is possible, it is very desirable that the nipples be sucked by a stronger infant or the breast receiving insufficient oral massage will begin to have a decrease in its function and, before the puny child is able to draw on the nipples with efficient force, the milk will have disappeared. This, of course, causes a further delay in establishing the maternal nursing. In hospitals and milk stations this procedure is quite possible, but it is not impossible under other conditions, and the attempt is well worth while in the interest of the weak infant.

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SUMMARY

Maternal nursing may be reestablished through the regular sucking of an infant, even though several months may have elapsed since the breasts were used for this purpose.

Mastitis, unless there is pus in the milk, does not contra-indicate breast-feeding nor do the mild infections.

After abscess of the breast or the contagious diseases every effort should be made to place the infant back on its mother's breast.

Mixed feeding or supplemental feeding is of great value while developing the maternal supply, especially during the first month.

To prepare a milk-supply for puny infants advantage accrues from putting older or stronger infants to the mother's breasts to regulate and develop the supply.

Every effort should be made to retain infants at the breast and physicians, milk stations and hospitals live up to their obligations to society only when they endeavor to maintain the maternal nursing for the longest possible period.

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ATROPIN THERAPY IN DIABETES MELLITUS *

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The atropin therapy of diabetes mellitus has recently been advocated by Rudisch[1] and by Forchheimer.[2] Carbohydrate tolerance is, according to Rudisch, greater with atropin than without. The more striking results were obtained with atropin sulphate, though in some instances atropin methyl bromid was substituted.

The following two cases of diabetes mellitus were tested out with atropin sulphate. A constant weighed diet, as detailed in the protocols, was given. When the daily variations in the amount of glucose excreted had been reduced to a minimum, atropin sulphate was administered in increasing doses for a sufficiently long period of time to give the drug a chance to exert any action of which it was capable. With both subjects the experiments were continued until toxic effects were observed. Under these conditions the glycosuria should be diminished if atropin sulphate is capable of increasing the carbohydrate tolerance.

Any drug which modifies the carbohydrate metabolism may influence the formation of the so-called acid bodies, acetone, diacetic acid and beta-oxybutyric acid. If atropin diminished the utilization of glucose within the organism, the acid bodies would increase in the urine. Therefore there is some interest attached to the determination of these substances in a study of this kind. In one of the cases observed, small but persistent amounts of acetone and diacetic acid were present in the urine, as shown by previous qualitative tests. Any possible increase in these substances was measured by the ammonia output and its relation to the total nitrogen of the urine. Normally the amount of ammonia nitrogen excreted is about 5 per cent. of the total nitrogen. A rise in this percentage indicates an increase in the excretion of acid substances.

In these analyses the glucose was determined by Benedict's method,[3] the ammonia according to Folin, and the nitrogen by the Kjeldahl process. The presence or absence of acetone was established by the Legal reaction, that of diacetic acid by the ferric chlorid test.

TABLE 1.—URINE ANALYSES AND MEDICATION IN A CASE OF DIABETES MELLITUS (CASE 1)

Date, 1911	Urine in Twenty-Four Hours: Volume, c.c.	Glucose, Per Cent.	Glucose, gm.	Total Nitrogen, gm.	Ammonia, gm.	Ammonia N. in Per Cent. of Total N.	Atropin Sulphate, Grains per Dose	Doses per Day	Symptoms
3/18	1,460	2.2	23.4	9.1	.34	3.1*	0	.	
3/19	1,290	2.4	30.3	9.6	.45	3.9*	0	.	
3/20	1,720	2.8	47.5	8.9	.55	5.1	0	.	
3/21	1,680	1.9	31.1	9.9	.58	4.9	0	.	
3/22	1,080	2.1	22.9	7.7	.48	5.1	0	.	
3/23	1,200	2.0	23.5	9.7	.58	4.9	1/100	3	
3/24	1,320	2.0	26.7	9.8	.55	4.6	1/100	3	Mouth slightly dry.
3/25	1,800	1.5	26.7	9.9	.63	5.2	1/100	3	Cheeks flushed.
3/26	1,910	1.5	29.0	12.2	.70	5.4	1/100	4	
3/27	1,560	1.2	18.4	9.7	.57	4.9	1/50	3	
3/28	1,300	1.6	20.2	9.2	.65	5.8	1/50	3	
3/29	1,480	0.6	8.7	5.5	.43	6.5	1/50	3	
3/30	1,300	0.8	13.4	7.0	.54	6.3	1/25	3	Vertigo; very dim vision.
3/31	1,940	1.6	30.3	10.1	.81	6.6	1/25	2	
4/1	1,560	1.3	19.5	10.1	.66	5.4	1/25	2	Head "feels full."
4/2	1,730	1.9	32.0	10.1	.75	6.1	0	.	
4/3	1,200	2.9	35.4	8.7	.59	5.6	0	.	
4/4	930	1.8	17.1	7.8	.59	6.2	0	.	
4/5	1,175	2.1	24.9	12.6	.76	5.0	0	.	

* The initial low figures for ammonia may be regarded as the after-effects of bicarbonate of soda taken before admission to the hospital.

TABLE 2.—RECORD OF URINE ANALYSES AND MEDICATION IN A CASE OF DIABETES MELLITUS (CASE 2)

Date, 1911	Urine in 24 Hours: Volume, c.c.	Glucose, Per Cent.	Glucose, gm.	Atropin Sulphate, Grains per Dose	Doses per Day.	Symptoms
8/9	1,000	1.0	9.6	0	.	
8/10	740	1.1	7.8	0	.	
8/11	1,150	1.1	12.2	0	.	
8/12	860	1.0	8.6	0	.	
8/13	810	1.1	8.8	0	.	
8/14	.....	...	....	1/100	3	
8/15	980	0.6	6.2	1/100	3	Mouth slightly dry.
8/16	.....	...	....	1/100	3	
8/17	1,085	0.7	7.2	1/100	3	
8/18	1,145	0.7	8.1	1/100	3	Vision dim temporarily.
8/19	1,095	0.8	9.1	2/100	3	
8/20	1,550	0.5	8.2	2/100	3	
8/21	1,485	0.3	4.6	2/100	3	Mouth very dry.
8/22	1,340	0.3	4.0	3/100	3	
8/23	1,150	0.4	4.1	3/100	3	
8/24	1,690	1.0	16.6	3/100	3	
8/25	1,155	1.0	11.6	4/100	3	
8/26	1,800	1.7	29.9	4/100	3	
8/27	1,030	1.3	12.9	5/100	3	Face flushed.
8/28	2,360	0.4	9.9	5/100	3	
8/29	1,920	0.7	13.6	6/100	3	
8/30	1,720	0.4	7.1	6/100	3	
8/31	1,600	0.5	7.2	7/100	3	Mouth intensely dry.
9/1	865	1.0	8.3	7/100	3	Pupils dilated.
9/2	1,430	0.4	6.0	7/100	3	
9/3	1,300	0.5	5.9	0	.	
9/4	1,400	2.3	31.8	0	.	
9/5	1,045	1.1	11.1	0	.	
9/6	1,400	1.8	25.2	0	.	

CASE 1. *Patient.*—A tailor, of Russian birth, aged 38, about two years ago began to suffer with polyuria, thirst, increased appetite and loss of weight. Glucose was discovered in the urine, but dietary restrictions were never observed for

* From the service of Dr. F. C. Wood, St. Luke's Hospital, New York.

1. Rudisch, J.: THE JOURNAL A. M. A., Oct. 23, 1909, p. 1366.
2. Forchheimer, F.: Am. Jour. Med. Sc., 1911, cxli, 157.
3. Benedict, S. R.: THE JOURNAL A. M. A., Oct. 7, 1911, p. 1193.

very long periods of time. After being treated for one month at the Vanderbilt Clinic as an out-patient, he was sent to Dr. Wood's service at St. Luke's Hospital. The patient's urine gave constant positive reactions of moderate intensity for acetone and diacetic acid. He was placed on the following diet:

Diet.—Breakfast: Coffee or tea with 1½ ounces of cream; two eggs cooked with ½ ounce butter; 3 ounces ham; one slice bread, weight exactly 1 ounce, with ¼ ounce butter.

Lunch: Bouillon with one raw egg; 3 ounces any lean meat, 1 ounce bacon; vegetables from list,[4] 3 ounces, with ½ ounce butter or oil; 1 ounce whisky or brandy; one slice bread, weight exactly 1 ounce, with ¼ ounce butter.

Afternoon tea with ½ ounce cream.

Dinner: Any clear soup; 4 ounces any lean meat; vegetables from list,[4] 3 ounces, with ½ ounce butter or oil; 1 ounce cheese, English, pineapple, Swiss or full cream-cheese; one slice white bread, weight exactly 1 ounce, with ¼ ounce butter; 1 ounce whisky or brandy; demitasse coffee.

Case 2. *Patient.*—A native of France, aged 59, foreman in a factory, was found to have sugar in his urine about four years ago. Only during the last year before examination had he been complaining of diabetic symptoms: occasional increased appetite and thirst. There had been some stiffness, pain and weakness in the legs. The neurologic department of the Vanderbilt Clinic diagnosed the case as one of multiple neuritis of diabetic origin. The urine occasionally showed a trace of acetone but no diacetic acid. After being observed for one month at the Vanderbilt Clinic, he was sent to St. Luke's Hospital. He was given the same diet as the patient in Case 1, except that 2 ounces of bread were ordered with each meal, instead of 1.

The above reports give no indication that atropin sulphate effects any change in the carbohydrate tolerance of sufficient importance to make the drug of clinical value in the treatment of diabetes mellitus.

157 West Seventy-Ninth Street.

WRIGHT'S SOLUTION WITH BIER'S HYPEREMIA IN INFECTIONS OF EXTREMITIES

PENN G. SKILLERN, JR., M.D.
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PHILADELPHIA

Infections of the extremities, especially of the fingers and toes, may eventuate in such distressing economic catastrophies that they should have a degree of care equivalent to that bestowed on serious abdominal or cranial injuries.

Taking for example a thecal whitlow, I have until recently followed the usual teaching of making a large incision and have even made it larger than at first sight seemed necessary because of the treacherous course of this infection. There followed, in severe cases, prolonged healing of the wound with ultimately more or less crippling. The patient was kept away from his work a long time, and was handicapped when he finally did return to work.

In an inaugural address on Bier's hyperemic treatment, Waterhouse[1] aims at "the employment of a less severe and less mutilating operation than would otherwise be necessary—thus, the required incisions may be few and small instead of many and extensive." In explanation of what he calls "preliminary puncture-incision," he says:

> In no case [of thecal whitlow] is a free incision requisite—a tiny incision, hardly more than a mere puncture, just sufficient to give exit to the pus, is all that is necessary. So soon as the puncture has been made the application of the constricting bandage rapidly, and far more certainly than any other method, gives rise to a ready discharge of pus and an improvement, painless and satisfactory, of the inflammatory process.

Not only have I found this method satisfactory, but I also have found its efficiency greatly increased by the following procedure. Having made the preliminary puncture-incision and applied the Martin bandage above the elbow or knee, the finger or toe, hand or foot is immersed in a vessel containing hot Wright's solution. The local hyperemia produced by the heated solution augments the passive hyperemia of the rubber bandage. The sodium citrate maintains the fluidity of the lymph and blood, thus preventing their coagulation in the depths and on the surface of the wound, as otherwise occurs. The sodium chlorid expedites osmotic transudation of serum from the engorged vessels. It is well, also, gently to irrigate the depths of the wound with this solution through a cannula at the outset.

Within a few minutes the pain is alleviated, and the improvement after the lapse of thirty minutes is astonishing. After pouring off the supernatant solution there will be seen at the bottom of the vessel myriads of pus-cells and necrotic particles. The rubber bandage is now removed, sufficient rubber drainage inserted, a drain-poultice of gauze saturated with Wright's solution applied, equalization of circulation established by a compression-pad of non-absorbent cotton, and the dressing completed by a muslin roller-bandage secured by pins and by elevation of the part. Before dismissal the patient is directed to obtain some sodium citrate and to make up the solution for home use by adding to a glass of hot water about two and one-half teaspoonfuls of common salt and a large teaspoonful of the citrate.[2] With this he keeps the dressing moist and warm. He is directed to procure a rubber bandage and to apply it, with the usual precautions, for thirty minutes every three hours. And finally, in the absence of septicemia, he is given an injection of a small dose of polyvalent stock bacterins of pyogenic organisms. In the presence of septicemia a strong dose of well-prepared antistaphylococcic serum may be injected. An autogenous bacterin is prepared for him as soon as possible.

I consider these measures the most rational, powerful and effectual at our command at the present time for the rapid mastery of these infections. Care should be taken not to use hydrogen peroxid until the wound becomes flat and shallow, and under no circumstances to squeeze the wound. I do not know but that it is a good plan occasionally to inject the wound gently with a weak solution of iodin.

The Martin bandage is applied above the elbow or knee, for below these points it cannot constrict the interosseous veins. It is spread over an area of four or five inches to lessen the liability of injury to large nerves. The limb below should be of a dusky-reddish hue, and the peripheral pulse should be plainly felt. The afflicted part should be painless, or at least any pre-existing pain mitigated. If the pain is increased, the bandage is too tight.

Waterhouse states that in doubtful cases this constriction is diagnostic of the absence or presence of pus previous to incision. If there is no pus relief ensues in

4. Vegetables allowed were: Asparagus, beet-greens, Brussels sprouts, cabbage, cauliflower, celery, chicory, cresses, cucumbers, egg plant, endive, lettuce, mushrooms, radishes, rhubarb, salsify, spinach, string beans, tomatoes, vegetable marrow.

1. Waterhouse: Brit. Med. Jour., Dec. 16, 1911, p. 1577.

2. Crandon: Ann. Surg., 1910, lii, 541.

five or ten minutes. If there is pus great pain ensues in a minute or two.

I have recently been baking limbs with the Martin bandage applied, thus combining active arterial with passive venous hyperemia, but have not thoroughly tried out this idea yet.

Everything possible should be done to restore function to fingers ravaged by pyogenic infection. Too often these patients are discharged with stiff and crippled digits. Judicious massage and passive motion often work wonders. More attention should be devoted to restoring mobility to ankylosed fingers by reconstructing tendons and joints. In the Transactions of the Fortieth Congress of the German Surgical Society last year,[3] Lexer, of Jena, writes:

> After suppurative destruction of the tendons of the fingers, small incisions are made under the skin and portions of the palmaris longus tendon from the same patient are transplanted. Homoplastic transplantations of not too thick tendons are just as feasible. These methods are established clinically and experimentally.

Being a vestigial muscle (often absent) the loss of the palmaris longus will not be noticeable. Tendon-sheaths might be supplied by transplanting portions of fascia lata, which recent reports[4] show to be very successful.

Not much will be gained, however, by transplanting tendons unless the joints functionate. It might be possible to restore these little articulations by the fascia-fat flap method, described at length by Murphy some years ago.

241 South Thirteenth Street.

GUNSHOT WOUND OF THE PREGNANT UTERUS

HERBERT W. FUDGE, M.D., ELMIRA, N. Y.

On account of its extreme rarity, the following case is reported:

History.—Miss H., a well-developed girl, aged 16, was brought to the Arnot-Ogden Hospital at 8 o'clock one evening. About 1 p. m. she had secured her brother's Winchester rifle, 32-40 caliber, and sitting on a low step in front of her house, placed the butt of the gun on the ground, the muzzle against her side and discharged the contents into her abdomen. A physician was called from a near-by town, who, after making an examination, applied an abdominal bandage and had her brought to the hospital, a distance of nine miles, in an ordinary farm wagon.

Examination.—The patient was found to be between eight and nine months pregnant. The bandages and clothing were saturated with blood. There was not a great amount of shock; pulse was 116 of fairly good quality, respiration 34, temperature 100.2. The bullet had entered about 7 inches to the right and on a line with the umbilicus; the opening, which was large enough to admit the index-finger, passed through the abdominal cavity and escaped 1 inch to the left and slightly below the umbilicus. A small portion of omentum was protruding from the wound of entrance, the surrounding skin being blackened with powder. Escaping from the wound of exit was from 6 to 8 inches of umbilical cord. Blood was slowly oozing from both openings.

Operation.—The patient was quickly moved to the operating-room, where hasty preparations for immediate operation were made. A median incision extending from the umbilicus to the pubes was first made. On opening the abdomen a full-term well-developed child was found to have been expelled from the uterus into the abdominal cavity, through a wound extending diagonally across the anterior aspect of the fundus. The baby was taken from the abdominal cavity, together with clots and a large amount of bloody amniotic fluid, and found to have been killed from a bullet wound through the back of the buttocks, shattering the spinal column and pelvic bones, and exposing the abdominal contents. The uterus was found firmly contracted but still contained the placenta. This was next removed without much hemorrhage. A portion of the membranes, having been caught in the cervix, was twisted into a cord and extracted as in an ordinary labor. The uterus was raised and large pads packed around it. An ugly blackened rent was found extending across its anterior surface, about 4 inches in length. There was not much bleeding, owing perhaps to the close contact of the muzzle of the gun, which seared the surfaces of the wounds. After cutting away the rough blackened edges of the uterine wound the surfaces were brought together with two rows of chromic catgut. The uterine sinuses began to bleed freely when trimmed, but this was quickly controlled by the sutures. The abdominal incision was closed by three rows of sutures, a large cigarette drain being left in the lower angle. Before suturing, the abdomen was flushed with a warm normal salt solution. The entrance wound was enlarged, the charred portions being cut away, the omentum returned to the abdominal cavity, the opening packed with iodoform gauze after putting in two or three sutures. The wound was cleansed as well as possible and also packed with the same material. The muscles and peritoneum of the abdominal wall were extensively lacerated. During the operation about 1 pint of saline solution was injected beneath the breasts, the patient's condition being good considering the extent of the injury and the time elapsing before operation. Gas-ether anesthesia was administered.

Postoperative History.—The Fowler position was maintained during the first ten days. On the day following the operation, the pulse was 130, temperature 101, respiration 32. There was very little abdominal pain. The temperature gradually subsided until the tenth day when it became normal and remained so. On the third day one grain of calomel in divided doses was given, followed by an enema. The bowels moved thoroughly and gave no further trouble. From the bullet wound of exit quite a free flow of pus began on the fourth day and continued until the tenth, when it ceased entirely. The cigarette drain was removed on the fourth day and the opening packed with iodoform gauze once daily. The external sutures were removed on the fourteenth day, and recovery from that time on was uneventful. The patient left the hospital twenty-five days after admission, entirely recovered.

3. Lexer: Supplement to Centralbl. f. Chir., No. 29, 1911; Ann. Surg., 1912, lv, 138.
4. Davis: Ann. Surg., December, 1911.

A NEW DEVICE FOR HYPODERMIC MEDICATION

JAMES T. GREELEY, M.D., NASHUA, N. H.

In common with most physicians who use hypodermic medication extensively, I have for some time been dissatisfied with the ordinary hypodermic syringe.

Asepsis is uncertain, the making of the solution is time-consuming, and impossible where water is not available; the joints often leak; the piston occasionally sticks, and the needle becomes dull and rusty from boiling. I wished a syringe that could be used instantly, that was sterile, that contained within itself the desired drug in permanent solution.

I have, therefore, devised the following instrument which has replaced, in my practice and in that of a few confrères, the time-honored piston syringe, with detachable needle and accompanying assortment of tablets.

The cannula is permanently attached to the closed end of the collapsible tube. The tube itself is of pure tin, of extremely thin walls, and so constructed that the entire contents may be expressed, when closed, at the folded end, by thumb-and-finger pressure.

A paraffin seal, through which the solid silver or gold-plated stylet passes, closes the needle-end of the tube. The required drug in permanent solution is placed within the tube, which is then closed hermetically by being folded on itself at the

larger end under pressure. It is then labeled and placed in a sterile covering ready for immediate use. Of course, the filling and closing of the tubes is done under aseptic conditions by a competent chemist.

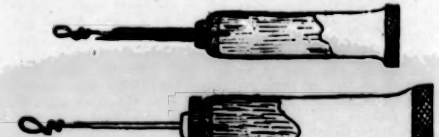
To use the syringe thus prepared, it is removed from its sterile covering and the stylet withdrawn, which withdrawal opens the contained seal.

The point of the syringe is elevated, and the base of the tube slightly compressed between the thumb and finger until the first drop of the solution makes its appearance at the needle's point, thus assuring the expression of any air within the tube.

The point of the needle is then passed through the prepared skin, and the thumb-and-finger pressure continued until the solution is transferred from the tube to the tissues.

The flattened tube and needle are, of course, thrown away after use, which appeals to the thoughtful patient.

I have had these collapsible hypodermic syringes made, filled, labeled and placed in a small pocket case containing



Individual hypodermic syringes.

one dozen assorted drugs and doses, and have found them not only a great convenience and time-saver, but in two accident cases in which water was not available I believe they have been life-savers.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

EUCODIN.—Methyl-codein bromide.—Eucodin is methyl-codeine bromide, $C_{18}H_{21}O_3N(CH_3)Br$.

Eucodin is produced by treating solutions of codeine with methyl sulphate and potassium bromide.

Eucodin is a white powder, melting at 261° C. (501.8° F.), easily soluble in water, difficultly soluble in alcohol and insoluble in chloroform and ether. It corresponds to 80 per cent. of codeine and to its own weight of codeine sulphate. It crystallizes in water in large six-sided prisms.

Eucodin is not precipitated from its aqueous solution by the addition of potassium bromide. Eucodin dissolves in concentrated sulphuric acid (1.84) with effervescence and with formation of a light yellow solution (distinction from codeine). On warming eucodin with sulphuric acid and a little ferric chloride, a violet-blue coloration occurs. With formaldehyd-sulphuric acid, eucodin gives a brown color, which later becomes bluish-black (distinction from codeine). On the addition of potassium hydroxide to an aqueous solution of eucodin, a yellow color but no precipitate is formed. An aqueous solution of eucodin treated with potassium ferricyanide and ferric chloride does not immediately become blue (absence of morphine). On the addition of silver nitrate solution to an aqueous solution of eucodin, a yellowish curdy precipitate of silver bromide, which is gradually reduced to metallic silver, is produced. The addition of ammonia hastens this reduction. Eucodin should not leave a weighable residue on incineration

Actions and Uses.—Eucodin is said to show a marked reduction in toxicity, as compared with codeine and especially diminution of the characteristic convulsive action of codeine. In animal experiments on frogs, rabbits and dogs eucodin showed some diminution in the narcotic action of codeine, while in comparison with codeine the convulsive action was insignificant.

It is said to be useful as a sedative as a substitute for codeine, especially in cough, where its action sometimes favors secretion.

Dosage.—0.06 Gm. (1 grain). It may be given in solution or in the form of tablets.

Manufactured by J. D. Riedel, Aktiengesellschaft, Berlin, Germany (Riedel & Co., New York). German patent Nos. 166,362 and 175,796. German trademark. No U. S. patent. U. S. trademark applied for.

Eucodin Tablets.—Each tablet contains eucodin 0.05 Gm. (5/6 grain).

EUSCOPOL.—Optically Inactive Scopolamine Hydrobromide.—Euscopol is optically inactive scopolamine hydrobromide, $C_{17}H_{21}NO_4.HBr$.

Euscopol is obtained from ordinary optically active scopolamine by treatment with a weak alcoholic solution of potassium hydroxide, subsequent purification of the resulting optically inactive base from which the hydrobromide (euscopol) is prepared.

Euscopol occurs as colorless crystals, easily soluble in water and alcohol, but slightly soluble in ether and chloroform. It melts at 181° to 185° C. The solution is optically inactive.

Excepting the optical inactivity and the difference in melting points, euscopol responds in general to the tests for the official scopolamine hydrobromide. The picrate of the optically active preparation crystallizes in thin needles, melting at 190° to 191° C., while euscopol picrate crystallizes in long indented tablets, while melt at 192° to 194° C. The picrate is prepared by adding 10 Cc. of a saturated aqueous solution of picric acid to a solution of 0.1 Gm. euscopol in 4 Cc. water. The resulting emulsion is dissolved by warming and the solution allowed to stand, whereupon crystals of the picrate gradually form.

If 0.1 Gm. euscopol be dissolved in 5 Cc. water and treated with 5 drops of a 1:1,000 potassium permanganate solution, the violet color should still be visible after five minutes (absence of apoatropin).

Actions and Uses.—It is claimed that euscopol has a milder action than ordinary scopolamin because of the absence of other alkaloids. It is employed as a substitute for the official scopolamine hydrobromide.

Dosage.—0.003 Gm. (1/200 grain).

Manufactured by J. D. Riedel, Aktiengellschaft, Berlin, Germany (Riedel & Co., New York). German trademark. No U. S. patent. U. S. trademark applied for.

PHARMACEUTICAL PREPARATIONS ACCEPTED FOR N. N. R.

The following dosage forms of accepted proprietary articles have been accepted for N. N. R.:

Tablets, Oxyntin with Pepsin.—Each tablet contains Oxyntin .3 Gm. (5 grains) and is capable of converting 3,000 grains of egg albumin into solution if tested by the U. S. P. assay process.

Capsules, Oxyntin with Nux Vomica.—Each capsule contains Oxyntin .3 Gm. (5 grains) and represents approximately the Nux Vomica strength of 0.33 Cc. (5 minims) tincture of Nux Vomica, U. S. P.

Capsules of Holadin, Bile Salts and Phenolphthalein.—Each capsule contains Holadin 0.13 Gm. (2 grains), Bile Salts, Fairchild 0.03 Gm. (½ grain), Phenolphthalein 0.065 Gm. (1 grain).

Capsules of Holadin, Succinate of Soda and Bile Salts.—Each capsule contains Holadin 0.20 Gm. (3 grains), Sodium Succinate Exsiccated 0.20 Gm. (3 grains) and Bile Salts, Fairchild 0.03 Gm. (½ grain).

Capsules of Bile Salts, Succinate of Soda and Phenolphthalein.—Each capsule contains Bile Salts, Fairchild 0.065 Gm. (1 grain), Sodium Succinate, Exsiccated 0.20 Gm. (3 grains), and Phenolphthalein 0.03 Gm. (½ grain).

Money Value of Factory Sanitation.—That manufacturers are beginning to see the money-value to themselves of sanitary factory conditions is the opinion of P. W. Blair. Writing in *Domestic Engineering*, Mr. Blair says: "The manufacturer is realizing the benefits he can derive from his employees by a larger production of goods through the installation of a complete sanitary equipment placed in his plant in such a manner that it saves time and keeps his employees in the best of health."—*The Survey.*

Therapeutics

PUERPERAL ECLAMPSIA

One of the most terrible complications of pregnancy and parturition is puerperal eclampsia, or puerperal convulsions. Foster's medical dictionary gives "convulsions" as a synonym of "eclampsia," and defines eclampsia as "an acute affection occurring without structural lesion of the nervous system, characterized by general or partial convulsions with more or less complete loss of consciousness."

Some writers have extended the term "eclampsia" to include cases in which convulsions do not occur. Davis and Foulkrod (THE JOURNAL, Jan. 7, 1911, p. 11) say:

> We may have eclampsia with a typical picture without convulsions. In such cases the eclamptic seizure is manifested, (1) by a headache of agonizing, blinding type, in which the patient may become unconscious from the pain; or (2) perhaps a burning, substernal pain, which is, in our experience, an almost constant feature of the preeclamptic stage, and may also accompany the convulsive type; (3) as a form of blood disintegration in which the poison may produce an anemia as marked as pernicious anemia, and giving the same blood-picture and physical signs, perhaps somewhat more rapid in its course; (4) as an irritant poison to the blood-vessels, as well as to the blood, a condition in which the blood contains various unformed principles or such an excess of normal principles as to produce irritation and even disease and disintegration of blood-vessel walls, which conditions result in sharp hemorrhage from any of the mucous membranes, from the placental site either before or especially after delivery, and into the retina or brain substances; and (5) as a type of acute disintegration of liver substance simulating acute yellow atrophy; under such conditions other organs may also share in the degenerative process, but not so markedly as the liver.

The more general adoption of such views as those enumerated above has led many writers to include a discussion of eclampsia under the more general term of "the toxemia of pregnancy." "The eclamptogenic toxemia of pregnancy" is also a term that has been applied to the gravidal disease, which is characterized by the various symptoms of the preeclamptic stage, and which may or may not terminate in convulsions.

An unsuccessful effort has been made to include puerperal eclampsia among the infectious diseases, and this conception of the disease has been abandoned (J. E. Welch, THE JOURNAL, Oct. 23, 1909, p. 1365).

After it became recognized that puerperal eclampsia was usually associated with the presence of albumin and casts in the urine, it was the generally accepted belief that the convulsions were the result of inflammation or congestion, or at least of impaired function of the kidney, and that they were directly due to the presence in the blood of such products of metabolism as were ordinarily eliminated through the kidneys. But more extensive research during recent years has made it evident that this idea of the disease does not tell the whole story. While it is generally acknowledged now that puerperal eclampsia is of toxic origin, it has been found that convulsions may occur even though examination of the urine immediately prior to the occurrence has shown an absence of albumin and casts.

A pathologic study of the organs of patients who have died as a result of puerperal convulsions has shown that other organs as well as the kidneys are frequently seriously affected in this disease. The liver especially has been found to present serious lesions. Other organs affected are the spleen, the thyroid and the parathyroid glands.

It is not possible at the present time to say that any one of these organs is affected by definite pathologic change in all cases of puerperal eclampsia, although changes are found more commonly in the kidney than in any other organ (Welch, THE JOURNAL, Oct. 22, 1901, p. 1361, table). The most definite statement that it is possible to make at the present time is that they are caused by some toxin or toxins circulating in the blood which are due to some abnormal changes in the protein metabolism.

A few cases have been reported of convulsions occurring in the course of the development within the uterus of the so-called mole pregnancy.

There seems to be some reason for believing that the disturbance of metabolism may originate in the placenta.

Another possibility is that they may be associated with the entrance into the blood of the mother of some unusual products of the metabolism of the child.

Statistics indicate that puerperal convulsions occur once in between two hundred and three hundred cases of parturition. The maternal mortality is said to vary from 20 to 40 per cent., and the infant mortality from 30 to 60 per cent. A disease accompanied by such appalling mortality is deserving of most careful management.

It has long been taught that the urine of every pregnant woman should be made the subject of careful examination, at least once a month. But inasmuch as convulsions may arise without any abnormal condition being detected in the urine, it is necessary to make further examination of the patient in order to detect impending trouble of this character. Symptoms which should make one suspicious that his patient may suffer from convulsions are attacks of sharp pain in the head, or under the clavicle or sternum, or at the epigastrium; nausea and vomiting; restlessness or unnatural somnolence, and disturbance of vision. These may not exist in a very striking way, or for very long before the actual convulsion occurs.

The observance of the blood-pressure is of considerable importance in determining the likelihood of impending convulsions.

Dr. J. C. Hirst, of Philadelphia (*New York Medical Journal*, June 11, 1910, p. 1204), has reported at length his observations of the blood-pressure taken with the Faught instrument, of 100 non-pregnant women, the same observations of 100 normally pregnant women, and of thirty-nine women with eclampsia. He found the normal blood-pressure to be 112 mm.; the normal blood-pressure in healthy pregnant women, 118 mm. He found that a blood-pressure below 125 mm. could be disregarded; that a blood-pressure of from 125 to 150 mm. needed careful watching and moderate eliminative treatment, and that a pressure of over 150 mm. needed usually active eliminative treatment and would in all probability, especially if it showed a tendency to climb higher, require the induction of premature labor. C. S. Bacon, of Chicago, asserts (THE JOURNAL, Oct. 22, 1909, p. 1364) that he has not seen convulsions occur when the blood-pressure has not been above 160.

General edema is also a sign of the eclamptogenic disease. Slight or moderate edema of the lower extremities may be only a symptom of obstruction to the circulation from pressure on return vessels. General edema is probably due to increased blood-pressure and to changes in the vessel walls and is an important toxic

symptom. It is shown not only by a soft swelling of the skin, but also by a rapid increase in the weight that is not accounted for by the quantity of food taken and assimilated. The determination of the weight increase is especially important in discovering "occult" edema which often precedes the more marked patent form.

The treatment of this condition must be considered first from the point of view of prophylaxis. In order to prevent the development of the toxemia which may ultimately prove serious the organs of elimination of every pregnant woman should act so thoroughly as to secure complete elimination of the ordinary products designed for excretion. The bowels should not be allowed to become constipated, and the action of the kidneys should be encouraged by the liberal drinking of water. As it is the protein metabolism which is believed to be chiefly at fault in this condition, the amount of meat allowed a patient should be limited. If there is any reason to believe that the patient is suffering from even a moderate degree of toxemia, meat should be entirely forbidden. The patient should be allowed to eat vegetables, fruits and cereals, and to drink milk. Moderate exercise should be insisted on, and warm baths should be taken several times a week, and warm clothing should be worn constantly so that the surface of the body may not be chilled, and especially the feet should be kept warm.

Just how much can be accomplished by such a line of treatment can never be definitely established, for if by careful management of the patient she passes through to a full-term delivery, and convalesces without a convulsion, one can never be certain that she would have had a convulsion had less care been exercised. In very many cases, however, convulsions come unexpectedly without any warning which has been recognized. When symptoms of toxemia cannot be controlled by diet and elimination, premature labor should be induced as a prophylactic measure.

The growing sentiment of the profession seems to be that when a convulsion has occurred the best thing to do is to remove the primary cause of the condition, which is the fetus in the uterus. The sooner delivery is completed, the better for the patient. If the convulsion occurs after labor has made some progress and the cervix is dilated, the fetus should be delivered at once, preferably by the application of forceps; if this is impracticable, by podalic version and delivery. But unfortunately in many cases labor has not commenced, or has made very little progress when the convulsion occurs. If labor has commenced and the cervix is partially dilated and obliterated, dilatation may be practiced. This may be done either by means of the fingers, or by various dilators, or by the rubber bag. If there is not urgent need of haste, the insertion of the rubber bag within the cervix and its dilatation with water produces dilatation in the most satisfactory way, but too much time must not be consumed by these rather slow methods.

If, as not infrequently happens, labor has not commenced when the convulsion occurs, if the cervix is long and hard and not dilated, or if the woman has a deformed pelvis, or if she is a primipara with a small and nondilatable vaginal canal, it is necessary to resort to abdominal cesarean section. This gives the woman a fair promise of life, and gives the baby an excellent chance.

Other procedures which have been recommended are vaginal cesarean section, which is strongly commended by H. D. Frey, of Washington, D. C., and Reuben Peterson, of Ann Arbor (The Journal, Oct. 22, 1911, p. 1365), and the operation known as laparo-elytrotomy (Thomas' operation) or extraperitoneal cesarean section. Except in multiparas with normal pelves, however, abdominal cesarean section is preferable.

While preparations are being made for the operation, or in case the surrounding conditions do not permit the severe delivery operation necessary, certain palliative measures may be employed. It has long been the custom, during a convulsion to administer an anesthetic, and chloroform has generally been the anesthetic chosen, but the recent careful investigations of the effects of chloroform on human subjects who have died after its administration, as well as on dogs which have purposely been put to death by its prolonged administration, have shown that chloroform is not without danger, and epecially to the organs which have been found to be affected in eclampsia. Consequently, there is a strong feeling at the present time that ether, rather than chloroform, should be the anesthetic chosen. It is not desirable, however, to give any anesthetic during the convulsion, for it cannot shorten the attack, and prevents the inhalation of air which is urgently needed. The anesthetic should be used only to prevent convulsions which seem coming on, or for operations.

Many advise the administration of from 1/6 to 1/2 gr. or more of morphin. This may be combined with 1/150 gr. of sulphate of atropin, 1/100 gr. of hydrobromid of scopolamin (hyoscin) (McPherson: The Journal, Oct. 22, 1909, p. 1363). These drugs diminish the convulsive attacks and may lessen the vascular pressure, and so relieve the strain on the heart. Some, however, condemn the use of morphin, saying that it hinders the action of the organs of excretion.

Some use viratrum viride, giving 5 minims of the tincture hypodermatically, and repeating a smaller dose of from 1 to 3 minims at intervals of one or two hours until the force and frequency of the pulse are materially diminished.

It has been the custom with many to produce diaphoresis. This may be accomplished by introducing hot air between the bedclothes, or by wrapping the patient in a wet blanket and placing hot bottles about her.

Some advise the administration of 1/10 grain of the hydrochlorid of pilocarpin in order to produce sweating. This is condemned by many on the ground that it depresses the heart. Furthermore, some condemn excessive diuresis, urging that the condition is due to the presence of toxins in the blood, and that by withdrawing the watery portion of the blood through the skin the solution of toxins in the blood becomes stronger and more likely to cause convulsions.

The action of the bowels should be promoted by giving Rochelle or Glauber's salts (it is as well not to use Epsom salts since it seems to be a fact that under certain conditions magnesium may be absorbed into the blood and cause poisoning), or by placing one or two drops of croton oil on the back of the tongue, if the patient is unable to swallow.

The action of the kidneys may be stimulated by giving the citrate of potassium in 15-grain doses, repeated every two hours.

Perhaps more efficient than any of these methods of elimination, but requiring skill in carrying it out, is the abstraction of blood from a vein and the intravenous injection of physiologic saline solution, as described in detail by Dr. F. J. Plondke, of St. Paul (The Journal, Jan. 14, 1911, p. 115). By withdrawing from 15 to

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30 ounces of blood from the veins and introducing in the place of it from one to two quarts of saline solution, a certain amount of the toxin in the blood is removed and that which is left is greatly diluted, which is believed to be of advantage to the patient.

While the above suggestions for treatment presume that the convulsions have taken place before delivery has been completed, and while many times convulsions cease as soon as the uterus has been emptied, still, recent statistics of 409 cases of eclampsia, compiled by Lichtenstein (*Arch. f. Gynäkol.*, xcv, No. 1, p. 1) show that in nearly two-thirds of the cases convulsions are repeated or first occur after delivery. A very important fact brought out by this investigation seems to be that the reason that in so many instances convulsions cease after delivery is that a large amount of blood has been lost from the uterus. In other words, Lichtenstein thinks that there is not so much actual value in removal of the irritation from the uterus as in the fact that a large amount of blood carrying toxins is lost during delivery by the patient. Lichtenstein also thinks that the greater the amount of blood lost, the greater likelihood of the convulsions not recurring. This would then simply emphasize the value of venesection.

Once the uterus has been emptied the prognosis at once becomes more favorable, although in some cases it is impossible by any means at our command to avert a fatal result.

THYROID TREATMENT OF ECLAMPSIA

The treatment of eclampsia above outlined is orthodox and represents the consensus of the best opinion of this dire catastrophe of pregnancy. A mode of treatment based on the theory of the relation of hypothyroidism to eclampsia may also be presented for consideration. It seems proved that the poisoning and convulsions are only in part due to insufficiency of the kidneys; that the poisoning has something to do with disturbed protein and nitrogen metabolism. It is positively known that the thyroid gland, among its many functions, has to do with rendering some of the metabolic products of protein metabolism innocuous to the system.

It is a fact that the thyroid gland normally enlarges and hypersecretes throughout pregnancy. It is quite probable that besides its other necessary functions during pregnancy an important one may be, through its hypersecretion, an increased ability to counteract any bad effect that could occur from increased metabolism in the mother's blood, due to an increased nitrogen metabolism necessary for the growth and nutrition of the enlarging uterus and placenta and the metabolism of the growing fetus. If, for any reason, the thyroid gland did not furnish sufficient secretion for the extra nitrogen metabolism and the extra amount of excretory products circulating in the mother's blood, symptoms of intoxication must occur. These symptoms have been outlined in the above article as forerunners or indicators of probable future trouble, i. e., eclampsia. If to the above symptoms nausea, constipation, headache, restlessness and general irritability are added much increase in weight, especially fat, a tendency to slowing of the pulse, a tendency to decreased secretion of the skin and a drying of the skin, positive symptoms of subthyroid secretion are present. Hence, whether the kidneys show albumin, or casts, or neither, it is good treatment to interdict all meat and meat extracts to relieve from the danger of poisoning and poor excretion of this kind of nitrogen.

Also, if the above symptoms are present, it would seem sensible treatment to give 3 to 5 grains of thyroid once a day, the amount depending on how it affected the heart. If the heart was made more rapid, the dose should be reduced.

If the above symptoms were present only in mild form, or if the patient presented no apparent symptoms of subthyroid secretion, and yet the physician was suspicious of such a condition, 2 or 3 grains a day of sodium iodid might stimulate the thyroid to better activity.

Another indication that nitrogen or metabolic toxins are really the cause of eclampsia is shown by the fact that in many instances the convulsions do not occur until the mother is in labor, i. e., during the severe muscle work. On the other hand, many instances occur in which the convulsions do not take place until after the labor has been entirely finished, and the increased amount of toxins from muscle activity have been circulating in the blood for some minutes, or even a few hours.

With the above considerations, rational treatment of puerperal eclampsia would seem to be to prevent threatened convulsions with ether or narcotics; to evacuate the uterus as rapidly as possible without calling in muscular exertion and hence the production of more toxins by the mother, and to consider uterine hemorrhage as both prophylactic and therapeutic.

If it is impossible to evacuate the uterus immediately, or if the convulsions occur after delivery has been completed, venesection is certainly indicated, the amount to be determined by the condition of the patient; then the transfusion of physiologic saline, or, if deemed best, hypodermoclysis, besides the introduction into the colon of warm physiologic solution. Such treatment will dilute the toxins in the blood, fill the blood-vessels with liquid, improve the circulation and improve all excretions. In the meantime, large doses of thyroid administered by the mouth are considered by many obstetricians as a most valuable treatment of puerperal eclampsia. Large doses may be given, as 20 grains at once, and 10 grains given every three hours thereafter for several doses, if the convulsions recur.

Although advised by many obstetricians, care must be exercised in the administration of large doses of morphin. Large doses of morphin control the convulsions simply by stupefying the central nervous system. Morphin is one more toxin, however, added to the system. It may increase the coma, which generally follows these convulsions, and it interferes with some of the secretions and excretions. If a narcotic or anticonvulsant is advisable, and it often is, chloral administered by the rectum, or by the stomach if there is no vomiting, may be employed either alone or in combination with moderate doses of morphin. The dose by the rectum should be 20 or 30 grains at once.

A Prescription for Barber's Itch:

R	Gm. or c.c.		
Acidi sulphurosi	15		ʒss
Glycerini	30	or	ʒj
Aquæ rosæ q.s. ad	400		ʒxij

M. Sig.: For external use. Apply as often as necessary.

A Prescription for Ozena:

R	
Thymolis iodidi	
Olei ricini	
Collodii	1 part each

M. Sig.: To be applied on pledgets of cotton wool.—Foxino.

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[For other information see second page following reading matter]

SATURDAY, MARCH 16, 1912

THE FATE OF ABSORBED PROTEINS

The immediate destiny of our food intake after it leaves the alimentary tract in the guise of a digestion product is a problem of supreme interest. Between the moment of absorption and the ultimate elimination of the effete waste of our sources of energy there is a gap of ignorance which is only slowly being filled by the accumulation of knowledge in the domain of intermediary metabolism. The physiologic chemist can follow the carbohydrates a little way as sugars to the liver and the fats along the thoracic duct into the general circulation. But the fate of the nitrogenous bodies has proved to be an almost impenetrable mystery. We are no longer content to speak learnedly of their "conversion" into blood proteins during their passage through the intestinal wall. There is no real justification for this purely hypothetical explanation. The one conspicuous fact is the comparatively speedy excretion of urea following an intake of protein. Investigators have tried, with little avail, to find the nitrogenous representatives of this metabolized protein somewhere on their way from the intestine to the kidneys, where the nitrogen is ultimately eliminated. In the main they have eluded chemical pursuit. Neither as protein nor as amino-acid have they been detected. The observed increase in ammonia content of the intestinal wall and portal blood has lent probability to the view that the amino-acid fragments of protein are denitrogenized very early on their way into the organism proper, the nitrogenous groups being split off as ammonia which is then synthesized into urea in the liver. It is undoubtedly true that such an abstraction and conversion of ammonia can be accomplished by this organ; but how are the distant tissues of the body to replenish their protein store if all nitrogen is thus speedily removed from the nutritive system by its conversion into urea at the very portals of entry?

The story of progress in experimental science is much like that of the development of important industries. When a fruitful natural resource or working field is discovered it is exploited with the cruder methods so long as a good return is yielded. Ultimately the reward of effort may diminish to a point where further undertaking becomes unprofitable. If at such a juncture new and better methods of operation can be introduced, the precious metal which is still hidden in what hitherto had appeared as unpromising ore can be brought to light. So in science new methods of investigation always lead the way to progress. To-day we can record another step in advance as the result of an evolution of chemical technic for which Professor Folin is responsible. By making possible the estimation of minute quantities of the various nitrogenous substances—urea, ammonia, etc.—he has been enabled to follow the amino-acids in their journey into the organism.[1] In their preliminary contribution on this subject, Folin and Denis have apparently demonstrated that the blood promptly transports the amino-acids from the intestine to every tissue in the body. It is, after all, quite what one would expect, to find the amino-acids, which must at times serve as food materials, to be distributed precisely like other nutrient compounds. The products of digestion leaving the intestine lead to an unmistakable increase in the non-protein nitrogen of the blood; the amino-acids thus brought into the circulation may then be rapidly absorbed from the blood by the tissues.

Here, then, is a suggestion of what becomes of the amino-acids absorbed from the intestinal tract. "The muscles and other tissues as well evidently serve as a storehouse for such reserve materials. The existence of such a reservoir must be taken into account in our theories of protein metabolism, for it certainly ought to make at least some points clear which were not clear before. The peculiar lag extending over several days in the establishment of a constant level of nitrogen elimination when extreme changes are made in the nitrogen intake is probably due to a filling or a depletion as the case may be of the reservoir. The different results obtained when a single substance like creatin or an amino-acid is fed together with diets rich or poor in nitrogen would also be determined by the condition of the reservoir. When full the creatin is eliminated and the amino-acid augments the urea output; when nearly empty both are retained."

It is, perhaps, too early to speculate on the conception of protein metabolism here suggested wherein the non-protein nitrogen of the blood may "rise and sink like a tide with reference to absorption from the digestive tract." We may well be content for the moment to have followed the intake a step further into the hidden recesses of metabolism.

THE INFLUENCE OF CAFFEIN ON MENTAL AND MOTOR EFFICIENCY AND ON THE CIRCULATION

H. L. Hollingworth,[2] professor of psychology at Columbia University, gives a summary of an extended investigation soon to be published in psychologic journals, on the influence of caffein on mental and motor

1. Folin and Denis: Protein Metabolism from the Standpoint of Blood and Tissue Analysis, Jour. Biol. Chem., 1912, xi, 87.
2. Hollingworth, H. L.: Therap. Gaz., Jan. 15, 1912, p. 1.

efficiency. The experiments were carried on in a specially equipped laboratory with the aid of six assistants and sixteen subjects, of both sexes, engaged for full-time service extending over a period of forty days. The most rigorous scientific method and precaution were employed throughout the investigation, the full details of which will appear in the complete report. Controls were employed among both the subjects and the assistants. These controls received capsules containing sugar of milk instead of caffein, and no subject knew whether or when he received caffein. The tests performed included motor efficiency measured by steadiness, coordinated movements, typewriting, etc., and mental efficiency measured by speed and accuracy of calculations, discriminations, and other mental processes. The same program of tests was performed for an hour five times each day. A condensed statement of the author's conclusions from 76,000 measurements and 800 efficiency curves with and without caffein follows:

In the test for steadiness, in which the arm is held extended and any unsteadiness recorded by appropriate apparatus, doses of from 1 to 4 grains of caffein citrate produced a slight nervousness not apparent until several hours after the dose. A dose of 6 grains produced a marked unsteadiness which was greatest after three or four hours. The effect of caffein on motor processes was that of a typical motor stimulant manifested by a decided increase in the speed and accuracy of the movements. This effect began in from forty-five to ninety minutes and lasted from three to four and one-half hours. No secondary or after-effect was produced in the seventy-two hours during which the effects of single doses were traced. In the coordination tests, of which typewriting is one, caffein citrate in doses of from 1 grain to 3 grains produced stimulation and increase of speed while larger doses produced retardation. In typewriting, however, the quality of the performance measured by the number of errors both corrected and uncorrected, for the whole range of caffein doses, was superior to the quality yielded by the same subjects on control days, and the increase in speed produced by small doses was not gained at the expense of additional errors.

In the calculation tests, as well as in other tests of mental processes, all squads showed a pronounced stimulation following caffein. This stimulation amounted to from 10 to 20 per cent. of the initial performance, whereas the control days showed a corresponding decrease of the initial performance due to fatigue. The total effect of caffein was greater for these than for any of the other tests. The stimulation began about one hour after the dose and was still present at the close of the day's work six or seven hours later. No evidence of any secondary depression was found. Instead, the morning following the experiment showed without exception a clear improvement over the work of the morning preceding the experiment. This improvement was not due to practice, as it was never found in the case of the control days.

H. C. Wood, Jr.,[2] has studied the effects of caffein on the circulatory and muscular systems. The average of all his experiments on the circulation shows a slight increase in blood-pressure beginning one-half hour after the administration of caffein, reaching its maximum in two hours and amounting to an average increase of 2.2 mm. of mercury pressure. The slowing of the pulse-rate began soon after administration of caffein and remained almost constant at an average of five beats per minute slower than before caffein was given. These statements represent averages of experiments made on normal adults under test and control conditions. The doses of caffein citrate ranged from 1½ to 6 grains. Dr. Wood also tested the effects of caffein on the reflexes using the Lombard knee-jerk apparatus. The results he describes as unexpectedly striking. "In every instance there was a marked increase in the knee-jerk beginning about twenty minutes after the ingestion of caffein, reaching its maximum in from forty to sixty minutes, and remaining above normal throughout the whole course of the experiment."

As to the effect on muscular efficiency Wood, after reviewing the results of Hoch's, Kraepelin's and Shumburg's experiments on the muscular action of human subjects, adds a series of experiments on frog muscles, both caffeinized and normal, and sums up all the evidence with the conclusion that caffein "acts as a stimulant to the reflex centers of the spinal cord; it enables the muscles to contract more vigorously without producing a secondary depression, so that the sum-total of muscular work which can be done by a man under caffein is greater than that which can be done without it."

It is gratifying to have the effects on the human system of a drug like caffein so investigated by rigorous scientific tests at the hands of capable investigators; only in this way will there be provided an adequate basis for correct conclusions as to the possible dangers of the use of caffein-containing beverages.

THE PROBLEM OF THE FEEBLE-MINDED

Dr. Charles B. Davenport[1] defines feeble-minded persons as those who lack one or more mental traits that are socially important. All defectiveness is a persistent infantile condition of one or more characteristics; a failure of development of certain socially important traits. Putting aside the old legal definition of a feeble-minded person—that he was a person who could not count or number twenty pence, or could not tell who was his father or mother, etc., and the Binet-Simon tests of mental grading, as incomplete in the former instance and erroneous in the latter—Davenport says that feeble-mindedness as ordinarily understood consists in an aggregation of the defective traits that are socially important, and that it exists in all degrees. Any of the

2. Wood, H. C.: Therap. Gaz., Jan. 15, 1912, p. 6.
1. Davenport, C. B.: The Origin and Control of Mental Defectiveness, Pop. Sc. Monthly, January, 1912, p. 87.

defects may occur isolated, or two or more of them together in one individual and such defectiveness is often not recognized as such; but it is the multi-defectives who constitute the main problem of the feeble-minded, or those who are socially inadequate. Among the well-known defects possessed by many individuals are word-blindness, figure-blindness, color-blindness, etc., or number-defectiveness, attention-defectiveness, memory-defectiveness, emotion-defectiveness, moral-defectiveness, and these defects are in general hereditary, and are the result of corresponding defects in the germ plasm of the parents. If both parents be mental defectives the combination of the germ cells will almost certainly result in a feeble-minded child.

"Defects," in Davenport's belief, are not pathologic conditions, but are merely deviations from the normal conditions of the adult. Every person shows defects at some stage of his life and only gradually overcomes them. It is a well-known biologic principle that the child in his development passes through the same series of physical and mental stages that the successive generations reached in the adult stage in race development, and it may be inferred that man's remote ancestors did not go in the adult stage beyond the point where the infant man is now. Adult apes, nearest allies of our ancestors, show the same inability to talk, to dress, to regard property rights and to be considerate toward others that the infant shows, and the acquiring of social traits by the normal child follows much the same road as the evolution of social man from the ape stage. Feeble-mindedness is thus an uninterrupted transmission from our animal ancestors. It is not reversion; it is direct inheritance, with failure to develop beyond it.

Even in prehistoric times, Davenport says, there must have been at work a natural control of these defectives by the elimination of those incapable of meeting the ever-increasing complexities of civilization; and death from cold and hunger of those who had not acquired the trait of hoarding supplies, or by violence, of those who did not respect the property rights of others, eliminated many. To-day we have reversed this process of elimination of the unfit animal strains. We protect in institutions scions of weak stocks up to the period of reproduction and then set the individuals free with the result of producing large numbers of feeble-minded, who in turn are carefully nurtured up to the reproductive period, are again set free to reproduce, and so the stupid work goes on of preserving and increasing our socially unfit strains. Davenport calls attention to the reaction against this as in the instance of legislation enacted to permit the sterilization of defectives. A less drastic method would be the segregation of these individuals throughout the whole reproductive period. Davenport believes the method is not so important, yet some way must be devised to eliminate these defective family lines or they will prove disastrous to society. The eugenists have recognized this defect in our humanitarian methods, and are already endeavoring to reconcile or conform those methods to the requirements of eugenics, which seeks to eliminate the feeble-minded and defective by the propagation of the fit only.

Current Comment

MEDICAL VS. LAY ADVERTISING—A COMPARISON

A few weeks ago THE JOURNAL showed up the fraud and deception connected with the exploitation of a so-called rupture cure. Since the article appeared, we have received a letter from the representative of a high-class popular monthly magazine asking for copies of THE JOURNAL'S exposé and containing the following statement:

"I can assure you that had we known that he was a bogus advertiser his advertisement would never have appeared in our columns."

This incident is fairly typical of the attitude of the better class of lay journals toward fraudulent medical advertisements. On the other hand, THE JOURNAL has for some years past exposed fraudulent products whose advertisements are carried in supposedly reputable medical journals. There has been no question of the accuracy of THE JOURNAL'S charges; had there been, it is perfectly sure that the Association would have been involved in litigation. The facts given by THE JOURNAL regarding various proprietary fakes are undeniable. In many ways, these "ethical" proprietaries are more fraudulent than many of the products that appear in lay journals, because they not only defraud the public, but also humbug the profession into whose hands the public entrusts its health. In spite of this, with two or three exceptions, the so-called independent medical journals continue to carry these fraudulent advertisements—and the spectacle of any of these journals cleaning up their advertising pages is so unusual that the two or three instances in which it has been done have called for special comment and praise from THE JOURNAL. All of which goes to prove that, generally speaking, the ethics governing medical journal advertising is rapidly falling behind that governing lay journal advertising. The reason? Either the lay publisher is more responsive to the wishes of his subscribers than is the medical publisher, or else the public has been more insistent than has the medical profession on the elimination of fraudulent advertising.

A NEW LIFE-SAVING FEATURE IN THE CONSTRUCTION OF TENEMENTS

Two structures recently erected on New York's east side are mentioned as examples of a new type of tenement buildings. It has been conclusively shown—by cold figures—that the old, crowded, insanitary tenement house in many instances yields a higher rate of interest on the money invested than buildings complying with hygienic principles, and it is therefore not to be wondered at that unsentimental big business has so long been deaf and blind to modern demands along these lines, and that it has been left for "four-per cent. philan-

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thropy" to meet the need. One of the distinguishing characteristics of the buildings mentioned is the open stairway, the primary purpose of which is to do away with all interior passages and hallways and to provide each family with its own entrance from outside the building. In an article on "Modern Tenement Houses,"[1] J. A. Rawson describes and illustrates the construction of these stairways and points out, besides the sanitary value, their great usefulness in case of fire, evidence of which is the fact that it has been decided that no fire-escapes are required on New York tenements having such open stairways. Some of the prominent features of the open stairs are: 1. Each particle of material is fireproof. 2. White tile on the walls aids in catching and reflecting every ray of light. 3. The top of each stair-well is covered with a pergola, so that neither rain nor snow can find its way into the hole. An iron frame-work holds glass panels over the top and glass windows part way up the sides with numbered sections which can be opened when desired. Immediately under its roof the pergola is always open for ventilating purposes. In view of the comparatively recent great loss of life by fires in New York City, it is reassuring to know that that city is beginning to lead in improvement work of this nature.

NOT A SQUARE DEAL FOR THE PHYSICIAN

In the Propaganda for Reform Department of this issue are given the results of an investigation carried on in the Association's laboratory to determine whether or not there is any chemical difference between acetphenetidin and phenacetin. As every physician knows, phenacetin was for some years the proprietary name of the substance known, chemically, as acetphenetidin. When the patent on phenacetin expired, the substance became public property. Nevertheless, the original patentees, the Farbenfabriken of Elberfeld Company, still list and sell the product under its proprietary name and also offer it under its chemical name. Under the proprietary name, the company demands more than five times the price it asks for the same product sold under its chemical name. The same anomaly is perpetrated in the United States by the only American firm that makes the product under both its proprietary and its chemical names — Lehn and Fink. Other American pharmaceutical houses sell the substance only under its official name. The investigations of the Association's chemists show that the only demonstrable difference between phenacetin and acetphenetidin is the price. *Verbum sat sapienti!*

THE THYROID AND MORAL RESPONSIBILITY

That patients suffering from exophthalmic goiter are often very irritable is well known; that this may also occur with those suffering with less marked degrees of hyperthyroidism is illustrated by a well-authenticated case in which a man, aside from a mild degree of tachycardia, showed almost no symptoms except a very quick and irritable temper which caused him on several occasions to be brought into the police court charged with wife-beating. Operation revealed a distinctly hypertrophied thyroid; its partial resection caused a disappearance of the tachycardia and a marked improvement in the man's disposition. This case led a wit to remark that if he ever got into difficulty on account of his quick temper he would plead that he was suffering from hyperthyroidism. Such a plea of partial irresponsibility on account of thyroidism (induced by taking thyroid tablets in excess) was actually made in a London police court recently.[1] We called attention some time ago[2] to the risks to health incurred by those who indulge too freely in thyroid or in some of the "antifat remedies" containing it; the cases just mentioned show that still other dangers beset those who try to get thin by this usually irrational method.

1. Rawson, J. A.: Pop. Sci. Month., February, 1912, p. 191.

EPIDEMICS OF SO-CALLED INFLUENZA

Since the pandemic of influenza in 1889-90, when within one year the whole civilized world was afflicted with the contagion, there have been lesser outbreaks at irregular intervals in most centers of population. These epidemics of coryza, sore throat and bronchitis have usually been called influenza or "la grippe," because of the characteristic contagiousness of the infection, the persistence of the symptoms, and the tendency to prostration and mental depression. But this diagnosis has not been satisfactorily confirmed by bacteriologists. In the great pandemic, Pfeiffer and others found in the nasal and bronchial secretions "pure cultures of the influenza bacillus in all uncomplicated cases." Subsequent reports seem to indicate that the influenza bacillus is a common invader of the air-passages in a large group of other diseases, notably whooping-cough (Davis), phthisis and measles. There is no evidence that this bacillus is more prevalent in the local epidemics of influenza than in the ordinary catarrhal infections. For example, in 30 per cent. of unselected cases of acute and chronic bronchitis the patients harbored influenza bacilli (Lord), although no epidemic prevailed, whereas only 6 per cent. of the patients examined in a typical influenza epidemic showed these organisms (Ruhemann). The bacteria most often seen are pneumococci, diplobacilli and streptococci. The time has come for a more careful, systematic study of the etiology of these localized outbreaks. By means of improved cultural methods, investigations into the bacteriology of the mucous secretions, exudates and blood of influenza patients promise valuable results. A recent epidemic of "septic sore throat" in Boston was studied by Richardson[3] and others. They traced the contagion to a streptococcus that was spread by means of milk. Müller and Seligman[4] have recently carried out a study of an influenza epidemic among children in Berlin and conclude that the causative organism is a streptococcus differing so much from the ordinary germ that they use the term "grippe streptococcus." Davis and Rosenow,[5] in a bacteriologic study of the recent epidemic of sore throat in Chicago, have demonstrated as the exciting

1. Pharm. Jour. and Pharmacist, Feb. 24, 1912, p. 238.
2. THE JOURNAL A. M. A., Oct. 14, 1911, p. 1290.
3. Richardson, M. W.: Boston Med. and Surg. Jour., Dec. 14, 1912, p. 899.
4. Müller and Seligman: Berl. klin. Wchnschr., 1911, xlviii, 1636.
5. This issue, p. 773.

agent a streptococcus of peculiar characteristics which in many respects resembles the organism described by Müller and Seligman. It is interesting to note that these three epidemics, occurring during the last year in widely separated communities, have all been caused by the streptococcus. It is to be hoped that in the future such epidemics in various cities will be more systematically and carefully investigated.

PROGRESS IN VITAL STATISTICS REGISTRATION

The Director of the Census has admitted Kentucky to the registration area of the United States for the year 1911. This makes the twenty-second state included and raises the population having accurate registration of deaths to 63 per cent. of the total population of the continental United States. The Kentucky law went into effect Jan. 1, 1911, so that it is a marked testimonial to the efficiency of the system of registration recommended by the Bureau of the Census that the results for the first year of its operation have entitled it to admission. Other states that have recently been included under the provisions of the model law are Ohio and Missouri, while the model bill has been passed by both houses of the Virginia legislature. Amendments to the present law, designed to bring it into more thorough compliance with the accepted system, are now being considered, on the recommendations of the State Board of Health, by the legislature of Maryland. Kentucky, however, is the only state south of the Ohio River to possess efficient registration of deaths, and the Bureau of the Census is actively engaged in recommending the passage of similar laws for other states of the south. A bill patterned after the model bill of the American Medical Association has just been passed by the legislature in Mississippi. This seems to be a good year for vital statistics. It is to be hoped that the example of these three southern states will be followed by all the others.

Medical News

ALABAMA

New Tuberculosis Camp.—A tuberculosis camp is to be erected on the site of the Red Mountain Camp, near Birmingham, within the next three months, with funds derived from the sale of Red Cross Christmas seals by the woman's auxiliary of the Antituberculosis Association of Jefferson County.

Civil-War Claim Allowed College.—In the omnibus claim bill recently passed by Congress, is an item of $4,200 for the medical department of the University of Alabama, Mobile, for the destruction of equipment and the use of the Mobile Medical College building during the Civil War by the federal troops for military purposes.

Rhett Goode Memorial Fund.—The friends of the beloved and lamented Dr. Rhett Goode, Mobile, to give expression of their affection for him, have decided to ask the alumni of the School of Medicine of the University of Alabama and the personal friends of Dr. Goode to unite in raising $1,000, to erect a suitable bronze tablet on the walls of the main building of the School of Medicine. Dr. T. H. Frazer, Mobile, is the treasurer of the fund.

DELAWARE

New Officers.—New Castle Medical Society: president, Dr. William Wertenbaker, New Castle; secretary, Dr. Albert Robin, Wilmington.

New Board of Health.—A new board of health has been appointed for Milford, consisting of Dr. William Marshall, Jr., Dr. J. G. Dawson, Dr. James P. Lofland, George H. Hall and George H. Roach.

Settlement Clinic Opens.—The first clinic of the new dispensary at the People's Settlement, Wilmington, was held January 29. Arrangements have been made to hold general clinics on Monday, Wednesday and Friday, and eye, ear and throat clinics on Tuesday and Thursday.

GEORGIA

College Transferred.—The old board of trustees of the Medical College of Georgia, Augusta, met March 6 and formally authorized the vice-presidents and secretary to convey to the University of Georgia the property and assets of the Medical College, in accordance with an act passed by the last state legislature.

New Officers.—Fourth District Medical Society, February 22: president, Dr. H. J. Goodwyn, Roopville; secretary, Dr. Homer Boatright, Carrollton. Warm Springs was selected as the next place of meeting.——Laurens County Medical Society: president, Dr. J. J. Barton; secretary-treasurer, Dr. A. R. Rozar, both of Dublin.

Personal.—Dr. L. B. Clarke has been elected president; Dr. C. W. Strickler, vice-president, and Dr. L. P. Stephens, secretary, of the medical board of Grady Hospital, Atlanta.——Dr. W. D. Jennings, Jr., has been appointed city physician of Augusta.——Dr. Raymond V. Harris has received a temporary appointment as assistant health officer of Savannah, and Dr. Marion R. Thomas has been appointed city physician, both of Savannah.

IDAHO

New State Officers.—Dr. William F. Howard, Pocatello, has been elected president; Dr. John Boeck, Boise, vice-president, and Dr. Edward E. Maxey, Boise, secretary, of the Idaho State Medical Association.

Medical Corps Reorganized.—Dr. William H. Tukey, Boise, has been commissioned as major, and Dr. Frederick A. Pittenger, Boise, captain, M.C., N.G., Idaho. The Medical Corps is to be reorganized on the basis of the Hospital Corps of the Army.

Indian School for Tuberculosis.—The school for tuberculosis for Indian children at Lapwai is now accommodating sixty-five pupils and more are to be accommodated in a short time. This institution takes Indian children suffering from tuberculosis from the states of Idaho, Oklahoma, Kansas, Minnesota, Washington, Oregon and Montana. About $15,000 is being expended in improvements.

Marriage Notice Was a Joke.—Dr. and Mrs. Charles B. Callard, Boise, write regarding the announcement of their marriage, which appeared in THE JOURNAL, March 2, that the notice in the Pocatello paper of their marriage was a joke, planned in extremely bad taste and carried out by acquaintances. Dr. and Mrs. Callard were married at Franklin, Neb., Dec. 26, 1906, and have lived in Boise for five years.

ILLINOIS

Vital Statistics for 1910.—The November 1911 number of the Illinois State Board of Health monthly bulletin just issued, gives in detail the vital statistics for 1910; there were 66,171 deaths reported for the year; 73.1 per cent. came from cities and villages having an aggregate population of 57.4 per cent. of the total population of the state. It is estimated that during the year there were 132,342 persons ill, who not only were unable to care for themselves, but required attention of others. Typhoid caused 1,039 deaths, or 122 more than for the previous year; measles 549, an increase of 164; scarlet fever 576, an increase of 59; whooping cough 448, a decrease of 55; diphtheria 1,332, an increase of 331; pellagra 60, a decrease of 34; tuberculosis 7,049, a decrease of 29; cancer 3,948, an increase of 252; diabetes 600, an increase of 8; meningitis 665, a decrease of 53; acute poliomyelitis 77; cardiac diseases 5,796, an increase of 104; pneumonia 8,838, an increase of 1,611; diarrhea and enteritis 6,309, an increase of 623; nephritis 4,065, a decrease of 354; suicides 875, an increase of 18; deaths from external causes 5,384, an increase of 921. Of these 290 were homicides. This bulletin also gives a tabulated statement showing the total number of deaths in the chief age periods and the percentage of the three most important causes of death in each period for the year; the report of deaths by counties with the variation as compared with 1909; the total number of deaths in cities and in comparison with 1909; the total number of deaths by months of males and of females, and the total number of deaths from

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classified causes by counties; the total reported deaths by counties by principal causes; the total report of deaths from classified diseases by sex, color, nativity and social condition; the total report of deaths from classified diseases by ages; the total report of deaths from classified diseases by months, and the reported deaths from principal causes from 1902 to 1910 inclusive. A table of returns of births for the year by counties is also included.

Chicago

Pay for Birth Registrations.—The first voucher in payment for the registration of a birth, after about nine years of delay, was issued March 9.

Incoming Vessels Bring Typhoid.—At a hearing before Colonel George A. Zinn, U. S. Army, March 9, on an appeal made by the sanitary district trustees to the War Department, asking better sanitation on ships within a radius of the intake of the drainage system, Health Commissioner George B. Young declared that many cases of typhoid in Chicago may be traced to unsanitary conditions on incoming vessels. It is expected that a bill will be introduced in Congress for the correction of this evil.

Visit of Dr. Noguchi.—Dr. H. Noguchi of the Rockefeller Institute, who has done important work in syphilis, visited Chicago from Saturday until Wednesday. He delivered the Fenger-Senn Memorial Lecture on The Luetin Skin Reaction in Syphilis, before the Chicago Medical Society, and demonstrated about twenty patients showing the luetin skin reaction whom he had inoculated on the previous Saturday. This reaction requires from twenty-four hours to four days to appear and adds another and less complicated test of the presence of syphilis than the Wassermann reaction or the modification of it devised by Dr. Noguchi.

INDIANA

Small-Pox at Winslow.—Twenty cases of small-pox from Winslow, Pike County, have been reported to Dr. J. N. Hurty, state health commissioner.

Dispensary for Sick Children.—A dispensary for sick children will be erected at the Fairview Summer Mission, near Indianapolis, and it is expected will be open by June 1. A donation for this purpose of $1,000 has been received from the estate of Alfred Burdsall.

Doctors' Club.—The Vanderburg County Medical Society, at its meeting February 13, appointed a committee of five to devise ways and means whereby a doctors' club may be established at Evansville, having in connection with it a modern laboratory and medical library.

County Society Publication.—At the meeting of the St. Joseph County Medical Society, February 27, it was announced that a monthly bulletin is to be issued, containing the program of the society and discussion of current work. Dr. C. E. Varier, South Bend, is in charge of the bulletin, which will be issued in April.

Personal.—Dr. L. R. Miller, Winslow, is reported to be ill with small-pox.——Dr. Benjamin S. Potter has been reappointed superintendent of the Asylum for the Incurable Insane, Julietta.——Dr. Gustave A. Petersdorf, Indianapolis, sustained painful contusions in a runaway accident, February 27.——Dr. Harry S. Leonard, Indianapolis, is reported to be critically ill with septicemia, due to an operation wound.——Dr. R. L. Sensenick, South Bend, has been elected president of the South Bend Public Welfare League.——Dr. W. H. Hoppenrath, Elmwood, was seriously injured in a runaway accident, February 20.

MARYLAND

Quarantine Lifted.—The scarlet fever quarantine in Smithburg, which included the closing of schools, churches and the prohibition of public gatherings, has been lifted.

Fire at State Hospital.—Fire on March 7 destroyed a large frame building on the grounds of the Maryland Hospital for Negro Insane, Crownsville. The building had been used as the temporary quarters for about seventy inmates, pending the completion of the new hospital. All the patients were removed in safety.

Baltimore

Physicians' Orchestra.—The Physicians' Orchestra, conducted by Dr. Charles F. Nolen, is to be made permanent. Membership is limited strictly to members of the Medical and Chirurgical Faculty of Maryland. Dr. B. Merrill Hopkinson is to have charge of the chorus.

Health Exhibition a Success.—The Health Exhibition conducted by the Medical and Chirurgical Faculty of Maryland at Osler Hall for the past three weeks, closed March 9. It was the most successful exhibit ever held in Baltimore and drew large crowds, both of children and adults.

Holman Association.—At a public meeting of the Holman Association, which has for its purpose the promotion of rural nursing, hygiene and social service, February 28, Dr. William H. Welch presided, and among other speakers were Miss Lydia Holman, Oxford, N. C., the founder of the Association; Misses Mabel Boardman and Jane A. Delano of the American Red Cross; Mr. Gifford Pinchot, formerly head forester of the United States, and Dr. Henry M. Hurd, formerly superintendent of Johns Hopkins Hospital.

President Remsen's Trip.—Dr. Ira Remsen, president of Johns Hopkins University, attended the annual banquet of the New York Alumni Association, March 6. On March 9 he was the guest of honor at the first annual banquet of the Alumni Association of Georgia, and on the same day a reception was tendered him by the University Club of Atlanta. On March 11 he spoke before students and faculty of the Georgia School of Technology, and on March 12 he addressed the students of the University of Georgia, Athens.

Personal.—Dr. Ward Huber has resigned as resident physician of the University Hospital to take a similar position in the James Walker Hospital, Wilmington, N. C.——Drs. W. W. Ford and Thomas R. Brown have returned from abroad.——Dr. Raymond C. Hussey has resigned from the charge of the Tuberculosis Hospital, Bay View, to take a position in the State Tuberculosis Hospital, Sabillasville.——Dr. C. P. Strauss, South Baltimore, who has undergone six operations for throat diseases, is reported now to be convalescent.——Dr. John H. Hogan has succeeded Dr. William W. Hobson, resigned, as chief of the accident department of Mercy Hospital.

MASSACHUSETTS

Hospital Dedicated.—On March 8, Winchester dedicated its new municipal hospital. The building is four stories in height and contains accommodations for twelve patients and quarters for superintendent and nurses.

Harvard Medical School Changes.—Dr. James J. Putnam, professor of nervous diseases since 1893, and Dr. Edward H. Bradford, professor of orthopedics, have resigned.——Dr. James J. Minot has been appointed exchange professor to Germany.

Small-Pox on Liner.—The 538 steerage passengers of the Cunard steamer *Ascania* were brought to Gallup's Island, Boston Harbor, because of the presence of a case of small-pox. All the passengers were vaccinated, and so far no new cases have developed.

New Sanatorium Officers.—Sharon Sanatorium, an institution for women of limited means and in the early stages of tuberculosis, has reelected Dr. William T. Sedgwick, president; Drs. Vincent Y. Bowditch and L. Vernon Briggs, directors, all of Boston; Dr. Bowditch, medical director, and Dr. Walter A. Griffin, Sharon, resident physician.

Hospital Addition.—The Robert Dawson Evans Memorial Building, the latest addition to the Massachusetts Homeopathic Hospital, Boston, was dedicated March 6. It is designed for special research work and the good fellowship among medical men of Boston was evident, as at the dedicatory exercises, addresses were made by Drs. W. B. Cannon, F. B. Mallory, C. P. Putnam and E. E. Southard of Harvard Medical School, and Dr. T. Leary, of Tufts Medical School.

Chemist Dead.—Charles Robert Sanger, Ph.D., professor of chemistry and director of the chemical laboratory at Harvard University, died in Cambridge, February 25, following a nervous breakdown, aged 51. He served as assistant in chemistry in Harvard University in 1881 and 1882, and from 1884 to 1886 was professor of chemistry in the United States Naval Academy, Annapolis, Md. From 1886 to 1892 he occupied a similar position in Washington University, St. Louis, until 1899, when he returned to his alma mater.

Legislation Passed and Pending.—The Committee on Public Health is having urged on its attention a bill to create dental nurses who may be properly registered and may assist in the care of children's teeth.——Because of the many fraudulent schools of optometry, optometrists are having difficulty in framing a bill.——The antivaccinationists have failed to secure favorable consideration from the legislature.——The effort of the Massachusetts Medical Society to secure a definition of what constitutes the practice of medicine, has been rejected by the Committee on Public Health.——Medical experts and consumers are urging vigorously the Ellis Milk Bill, which will place the supervision of the production of milk in the hands of the State Board of Health.

MICHIGAN

Personal.—Samuel T. Douglass, Detroit, has been appointed a member of the Board of Health to succeed himself.——Dr. Jean A. Vernier has returned from California and resumed practice in Detroit.

County Sanatorium Plan.—The Alger County Board of Supervisors has under consideration the establishment of a sanatorium for incurable consumptives.——The Baldwin Tuberculosis Sanatorium has doubled the number of its rooms and by June 1 plans to have improvements made that will increase the capacity of the institution to one hundred.

Founders' Day Celebrated.—Founders' Day of the Medical Department of the University of Michigan was celebrated February 22. Dr. Lewis S. Pilcher, Brooklyn, a graduate of the class of 1866, delivered the address of the evening on "Antitoxin Against Commercialism in Medicine." Following the address, a reception was held in honor of Dr. Pilcher and Mr. Frederic G. Hallett of London, England.

Conference of Tuberculosis Workers.—The Grand Rapids Anti-Tuberculosis Society held a conference of state workers, February 24, to discuss tuberculosis and its prevention, and in the working out of this problem, addresses were delivered by Dr. R. L. Dixon, Lansing, secretary of the state board of health, on "Cooperation in the Antituberculosis Crusade"; by Harvey D. Brown, Ph.D., state lecturer of the Wisconsin Antituberculosis Association on "Methods in the Antituberculosis Battle and Exterminating Tuberculosis"; by Dr. Collins H. Johnston, Grand Rapids, president of the Michigan Association for the Prevention and Relief of Tuberculosis on "Milestones of Progress."

MINNESOTA

Hospital Association Incorporated.—A Hospital Association has been incorporated at New London, to establish and manage a hospital at that place.

Physicians Join Civic Association.—The membership rolls of the Civic and Commerce Association of Minneapolis contained the names of eighty-two physicians.

Destruction of Medical Building.—Millard Hall, the medical and dental building of the University of Minnesota, was recently destroyed by fire, with a loss of $60,000.

Typhoid at Two Harbors.—Two Harbors is experiencing a severe typhoid epidemic. The doctors report fifty-four known cases, and in addition to this there are many suspects. An investigation of the city water-supply is being made by representatives of the State Board of Health.

Medical Tenants Honor Landlord.—One hundred and four physicians of St. Paul, who have offices in the new Lowry Building, gave a banquet, February 24, in honor of Horace Lowry, president of the investment company, which erected the building. Dr. J. W. Chamberlin was toastmaster.

Pathologic Society Organized.—On February 20 the Minnesota Pathologic Society was organized at the Pathologic Building of the University of Minnesota, with the object of qualifying the state and discussion of pathologic problems. Residents of the state of Minnesota who are actively interested in some branch of pathologic work are eligible to election as active members. About ninety have signified their intention to become charter members of the association, and the following officers have been elected: president, Dr. A. S. Hamilton, Minneapolis; vice-president, Dr. J. S. Gilfillan, St. Paul; secretary, Dr. H. E. Robertson, Minneapolis; treasurer, Dr. J. F. Corbet, Minneapolis; and censors, Drs. F. L. Adair, Minneapolis, R. H. Mullin, Minneapolis, and H. A. Tomlinson, St. Peter.

MISSOURI

New Officers.—Boone County Medical Society: president, Dr. M. D. Lewis; secretary-treasurer, Dr. A. W. Kampschmidt, both of Columbia.

Addition to Tuberculosis Camp.—Dr. W. S. Wheeler, health commissioner of Kansas City, has been authorized by the hospital and health board to purchase a tent of sufficient size to accommodate the overflow at the outdoor clinic and the tuberculosis pavilion. The tent is to be erected near the General Hospital.

Personal.—Dr. G. W. Belshe, Trenton, who disappeared March 1, was found wandering in a field, March 5, about six miles from Trenton, a physical and mental wreck, emaciated and half frozen.——Dr. A. M. Shaw has succeeded Dr. J. L. McDermott as police surgeon at the Walnut Street Police Station, Kansas City.——William C. Teichmann, formerly city chemist of St. Louis, has been appointed U. S. consul at Mannheim, Germany.——Dr. Orville J. Sloan, Neosho, has been commissioned first lieutenant, M.C., N.G., Mo

St. Louis

Trachoma in St. Louis.—A resolution was introduced by Dr. James Stewart, supervisor of hygiene of the board of education, at the meeting of the St. Louis Medical Society, March 2, asking that trachoma be made a reportable disease.

Commemorate Opening of Old Medical School.—The St. Louis Medical History Club at its meeting, February 22, commemorated the laying of the corner stone of Kemper University in 1840, the first institution dedicated to medicine, west of the Missouri River. The address was made by Dr. H. M. Whelpley.

MONTANA

New Officers.—Silver Bow County Medical Association: president, Dr. A. E. Anderson; secretary, Dr. Alfred Karsted, both of Butte.

New President State Board.—Dr. Daniel J. Donohue, Glendive, has been elected president of the State Board of Health of Montana, vice Dr. William Treacy, Helena, deceased.

Sanatorium Sold.—The Bozeman Sanitarium has been formally transferred to the Methodist Deaconess Board of Montana for $10,000. The institution will, from this time on, be operated as a public hospital.

NEBRASKA

New Officers.—Custer County Medical Society, February 13: president, Dr. B. E. Robinson, Arnold; secretary-treasurer and delegate to the state society, Dr. F. W. Buckley, Broken Bow.

Tuberculosis Dispensary for Omaha.—The dean of Trinity Cathedral, Omaha, has offered two rooms in the Gardner Memorial Hall for a tuberculosis dispensary to be established by the Visiting Nurse Association, and $750 is already available for use in the dispensary.

Bids for Tuberculosis Hospital.—The Board of Public Lands and Buildings on February 10 opened the bids for the new tuberculosis hospital to be erected at Kearney. The lowest bid for the building was $11,867, and for the plumbing $2,900. According to the plans the building will cost about $14,000 and is to be completed in 120 days from the letting of the contract and is to consist of a central two-story portion with two one-story wings. There will be twenty rooms for patients.

NEVADA

New Officers.—White Pine County Medical Society: president, Dr. Albert F. Adams; secretary-treasurer, Dr. William T. Gleason, both of Ely.

Personal.—Dr. Reinhard K. Hartzell, Reno, has been appointed a member of the Reno Board of Health, vice Dr. Archibald L. Rice, resigned.——Dr. William F. Boylan, National, has been appointed government physician at the Indian School, McDermitt.

NEW YORK

State Hospital Site.—Options have been secured on 902 acres at Marcy, as a site for the new Utica State Hospital for the Insane. The purchase price of this site is about $115,000.

Monthly to Be Quarterly.—The *Hospital and Sanitary Record*, a journal which has been published monthly in Canandaigua by local practitioners, will hereafter be published quarterly after each regular meeting of the Ontario County Medical Society. The editorial staff will be made up of representatives of the County Medical Society, County Laboratory and Oak Mount Hospital.

Personal.—Dr. Jeremiah MacDonald, Binghamton, fell while leaving a train and severely sprained his ankle.——Dr. Edward W. Mulligan has been appointed chairman; Dr. Joseph R. Culkin, vice-chairman, and Drs. Charles R. Barber, David B. Jewett, Lucius L. Button and Ralph R. Fitch have been appointed members of the Rochester Chamber of Commerce Committee on Public Health.——Dr. Benjamin Van Campen, Olean, was thrown from his sleigh in a runaway accident, February 26, and fractured a finger.

Health Association Asks Appropriation.—The Rochester Public Health Association has addressed a memorial to the mayor, which was presented by Dr. Montgomery E. Leary, February 7, and which asks for an appropriation of $5,000 in the tax levy to compensate the association in part, at least, for the large amount of free service given by it to the public. This

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has included the maintenance of the free dispensary and the open-air school, the examination of school children, the maintenance of the day camp in summer for incipient cases of tuberculosis and the educational work which has been carried on by the association.

New York City

Women May Be Ambulance Surgeons.—For the first time in the history of Bellevue Hospital, the authorities have decided to allow women to take the examination for ambulance service.

Harvey Society Lecture.—The last of the present course of Harvey Society Lectures will be given at the New York Academy of Medicine March 24, when Dr. W. S. Thayer of Johns Hopkins University, Baltimore, will speak on "Malaria."

Milk Stations in New York.—The Department of Health now has thirty-three infants' milk stations, nineteen of which are in Manhattan, twelve in Brooklyn and two in the Bronx. A total of 3,011 babies is being cared for by these institutions.

Free Lectures on Public Health.—Drs. Abraham Jacobi, Grace N. Kimball and John F. Huber delivered lectures February 21 in the series being given under the auspices of the Hygiene Committee of the New York Federation of Women's Clubs and the Public Health Education Committee of the New York County Medical Society.

Osteopaths Must Not Sign Death Certificates.—Charles F. Bandel, while president of the State Society of Osteopaths two years ago, signed a death certificate and, when it was refused by the registrar of records in the Health Department of Brooklyn, suit was brought. The Court of Appeals on March 8 sustained the decision of the lower court and upheld the right of the New York City Board of Health to prescribe that certificates of death must be signed by a medical practitioner.

Lectures at the New York Skin and Cancer Hospital.—A course of lectures is to be given in the out-patient hall of the New York Skin and Cancer Hospital on Wednesday afternoons at 4:15, beginning on March 13 and continuing until April 24. The first six lectures will be delivered by Dr. L. Duncan Bulkley, whose subject will be "Diet and Hygiene in Diseases of the Skin." The last lecture of the series will be given by Dr. William Seaman Bainbridge on "Some Recent Methods of Treatment of Malignant Diseases."

Personal.—Dr. James R. Hayden was operated on March 2 for appendicitis and is reported to be doing well.——Dr. Otto Kiliani has returned from Europe, where he has been studying carcinoma.——Drs. Philip G. Cole and John S. McCallum, who are about to leave Harlem Hospital, were given a dinner by the staff, February 29.——Dr. John J. McAllister is ill at his home in Scarsdale from septicemia, due to an autopsy wound. ——A patent has been allowed Dr. Adoniram B. Judson for the improvement on a machine for picking and breaking ice, coal, ores and other substances.

Sea Breezes for Cripples.—A movement has been started for the care and treatment of crippled children or those in a state of convalescence after operations which proposed to become national in extent. It was inaugurated through the efforts of several well-known women in New York and Brooklyn and plans to establish a chain of homes along both the Atlantic and Pacific coasts in order that there may be accommodations for children of inland cities all over the country. Branch homes have already been established at Sheepshead Bay, Seattle, Denver, Tampa and San Francisco. Branch societies have been formed in many cities and towns throughout the country.

Where Doctors are Needed.—The regular meeting of the New York Academy of Medicine on the evening of March 7 was given up to listening to addresses by medical missionaries. Secretary Robert E. Speer of the Presbyterian Board of Foreign Missions, Dr. Edward E. Hume, secretary of the Yale Medical School in China, and Dr. Wilfred M. Post of the American Hospital at Konia, Turkey, told of the need for physicians in these countries and the opportunities that awaited the physician who was willing to go. In Persia there are only thirty doctors to 9,000,000 population; in Korea, only thirty-six physicians to a population of 12,000,000; in Chili there is an average of one physician to every 3,225 of the population; in Bolivia, one physician to every 10,000 of the population; not a single physician to 5,000,000 South American Indians. In Chili 80 per cent. of the children die before they reach the age of two years. Dr. Post, in telling of the conditions in Persia, said there was an area larger than New York State and an immense population where there was neither physician nor hospital.

Feeble-Minded Children in Schools.—The New York Society for the Prevention of Cruelty to Children some time ago appointed a committee to investigate the subject of abnormal and feeble-minded children. The results of the investigation show that there are in the city of New York at the present time 7,000 distinctly feeble-minded children. There are about an equal number of idiots and imbeciles who do not attend school. These classifications do not include borderline cases or morally defective children, which would probably bring the number of feeble-minded children in the public schools up to 10,000. Recent census statistics show that 30 per cent. of the feeble-minded children in the general population of the United States are the progeny of aliens or unnaturalized citizens. These investigators think therefore that at least 3,000 of the 10,000 feeble-minded children in this city are the offspring of the 9,000,000 aliens who have come here during the past ten years. The committee urges the enactment of legislation whereby all children may be subjected to a preliminary examination as to their mental development, before being admitted to the schools, and from time to time thereafter, and whereby all children coming before the children's court be subjected to a similar examination. They also urge that an institution be provided for the care of feeble-minded children and that more watchfulness be employed to prevent the admission of such children with immigrant families. Congress has been urged to appropriate sufficient funds to make this greater care possible.

NORTH CAROLINA

Sanatorium Incorporated.—Mount Olive Sanatorium has been incorporated at Mount Olive, with a capital of $25,000, to provide an institution for the treatment of diseases and teaching and training of nurses.

Nurses' Home.—At the last annual meeting of the North Carolina State Association of Registered Nurses, steps were taken for the erection of a nurses' home at Black Mountain, for which a site of two and a half acres has been donated by Dr. Isaac J. Archer, Black Mountain. The committee announced that only $2,000 additional were required for the erection of the first building.

Hospital for Elizabeth City.—The Pasquotank, Camden and Dare County medical societies, at a recent meeting, discussed the movement for the establishment of a hospital in Elizabeth City. They agreed as to the necessity of the hospital and are anxious to have it located in Elizabeth City, but they do not feel called on to furnish all of the money for its establishment and maintenance. The matter is to be considered later by the Chamber of Commerce and other organizations of Elizabeth City.

OHIO

Physicians Ill.—Dr. G. R. Schuster, Dayton, who has been seriously ill with pneumonia, is reported to be improving.—— Dr. W. V. Blythe, Youngstown, is ill with influenza in the City Hospital.

Lucas County Tuberculosis Hospital.—The directors of the Lucas County Infirmary, Toledo, have adopted resolutions transferring $10,000 to the county commissioners to enable the latter to advertise for bids for the construction of the County Tuberculosis Sanatorium.

Tuberculosis Hospital Decision Reversed.—The Circuit Court in the case of the county commissioners of Darke County against the State of Ohio, regarding the proposed tuberculosis hospital in Darke County, has reversed the action of the lower court regarding the sale of the land for the hospital, but upholds the unconstitutionality of the trustees in appointing a superintendent, hiring nurses and furnishing the hospital for tuberculosis patients.

Personal.—Dr. W. D. Micklethwait, Portsmouth, is suffering from an infected punctured wound of the foot.——Dr. A. C. Taylor, Cleveland, was rendered unconscious in a collision of automobiles, February 27.——Dr. W. W. Smith, Portsmouth, was operated on in Christ Hospital, Cincinnati, February 29, for the removal of a tumor from a tendon of the left leg.—— Dr. J. W. Sorrick was stricken with cerebral hemorrhage at his home in Kenmore and is reported to be in serious condition.——Dr. Joseph P. Baker has been reelected president of the board of health of Findlay.——Dr. Earl Gilliam is erecting a one-story office building for physicians in East State Street, Columbus.

Hospital Notes.—St. Elizabeth's Hospital, Youngstown, has concluded the purchase of a residence property adjacent to the institution and having on it a residence which will be used as a nurses' home.——The board of managers of Spring-

field City Hospital has decided to add twenty-six rooms to the institution.——Good Samaritan Hospital, Zanesville, has increased the accommodation for patients from seventy to eighty and asks for donations for the equipment of the new rooms.——Eight physicians of Delphos met recently and organized as a hospital organization, with Dr. Manford M. Hixson as president; Dr. Norman E. Brundage, vice-president, and Dr. Ezra Burnett, secretary and treasurer.

Cincinnati

Clinic for Defective Children.—Dr. William Ravine, chief medical inspector of the public schools, has been placed in charge of a clinic to be opened at the Raschig School for the treatment of school children who are physically or mentally defective or abnormal.

Personal.—Dr. Arch I. Carson has been promoted to chief surgeon of the police and fire departments, vice Dr. Thomas C. Minor, deceased. Drs. William E. Savage and Carleton G. Crisler have been appointed his assistants.——Drs. W. W. Anderson, C. J. Kehm, Charles North and George Hermann have resigned as examining physicians for the civil service commission.——Dr. Frances Hollingshead has been appointed assistant superintendent of the House of Refuge.——Dr. Walter Griess has resigned as surgeon of the Police Department.

Higher Medical Education.—The Cincinnati Medical Civic Association has appointed the following committees to take up the aggressive action desired in the campaign for a higher medical education in Cincinnati and a betterment of the conditions now prevailing: medical education; municipal health administration and medical school inspection; national board of health; meetings, lectures and popular instruction methods; health legislation; food and drug legislation; antituberculosis; milk commission; social science work and ethics, and cooperation with other civic bodies and the Red Cross.

OREGON

Hospital Dedicated.—The new Sacred Heart Hospital, Medford, was dedicated with formal ceremonies, February 17. The chief address was made by Dr. E. Barton Pickel.

Personal.—Dr. J. R. Wetherbee, Portland, was operated on at Good Samaritan Hospital, Portland, January 29.——Dr. Charles Hines has been appointed postmaster of Forest Grove.

County Societies May Unite.—At the meeting of the Marion County Medical Association held in Salem, February 19, the plan was discussed of uniting the medical associations of Polk, Yamhill and Marion counties into one association, and a committee was appointed to confer with the representatives of the other associations as to the advisability of the plan.

PENNSYLVANIA

State Asylum Completed.—The State Homeopathic Insane Asylum at Rittersville, which has been under construction for ten years at a cost of $2,200,000, was practically completed on March 3. The work of furnishing the institution will be started at once.

Changes in State Vaccination Commission. — Ex-Governor Samuel W. Pennypacker and George Wharton Pepper have resigned and their places have been filled by the appointment of Messrs. Henry O. Lippincott, Philadelphia, and Edward A. Woods, Pittsburgh. The commission organized March 8, electing Mr. Emil Rosenberger, chairman, and Mr. Lippincott, secretary. Weekly meetings are at first to be held to lay out the plan of work of the commission, and later the testimony of witnesses will be taken.

Coatesville Schools Closed.—In order to correct false reports concerning the prevalence of other communicable diseases in Coatesville, Dr. C. J. Hunt, the state physician, has made the following report of such cases now in the city: "Mumps, six; whooping cough, seven; diphtheria, one; measles, no cases since January 1; scarlet fever, no cases since January 1." On account of the fact that more than 400 pupils, or about 22 per cent. of the attendance of the borough schools, have been absent on account of their own illness or illness at home, the School Board has decided to close the schools for twenty days, opening again on March 25. The principal and one of the teachers of the High School are ill with typhoid fever.

Philadelphia

Fire in Medical College.—Fire in the basement of the Jefferson Medical College, due to an overheated incinerator, February 15, was extinguished with slight damage to the building.

Hospital Clinical Society Organized.—The staff of the Episcopal Hospital met February 19 and organized the Episcopal Hospital Clinical Society, electing Dr. Francis W. Sinkler, president, and Dr. E. G. Alexander, secretary-treasurer.

Gift to College Library.—A gift of $1,000 toward the chemical library of the Medico-Chirurgical College was announced March 6. The donors, each of whom gave $250, are Dr. William H. Greene, former treasurer of the college, and three trustees.

New Dispensaries Opened.—The new dispensaries of the Medico-Chirurgical Hospital were opened for public inspection March 7. The building, which is immediately opposite the hospital, has a frontage of 59 feet and depth of 144 feet, and has a floor space of about 10,000 square feet. Almost all of the rooms are lighted by sky-lights from above, thus ensuring privacy and abundant illumination. At one end of the building is a large waiting-room, from which a corridor extends the length of the building and on each side are rooms for treatment of the various classes of disease.

TENNESSEE

New Officers.—Giles County Medical Society: president, Dr. W. D. Abernathy; secretary, Dr. J. A. La Rue, both of Pulaski.

Clinic for Colored Surgeons.—Dr. Daniel H. Williams, Chicago, conducted a surgical clinic during the second week in February, at the Meharry Medical College, Nashville.

Health Officers' Conference.—A meeting of the city and county health officers has been called by the secretary of the State Board of Health, to be held in Nashville, April 2-4.

Personal.—Dr. A. M. Gamble, Maryville, has succeeded Dr. J. R. Rathmell, Chattanooga, resigned, as a member of the State Board of Health.——Dr. John R. Muse, Lexington, is reported to be critically ill.

Physicians Aid Associated Charities.—Fifty physicians of Memphis have agreed to contribute twenty-five calls each a year to the poor of the city, the calls to be made deserving cases so certified by the associated charities.

Society Protests Against Change of Hospital Management.—At a recent meeting of the Knox County Medical Society, resolutions of protest were adopted against the proposed ordinance placing the management of the Knoxville General Hospital with the board of city commissioners.

Small-Pox.—The secretary of the State Board of Health is said to have issued quarantine orders against Dunlap and other sections of Sequatchie County, where there are said to be more than one hundred cases of small-pox.——Epidemic small-pox is reported in West Point, Lawrence County, where twenty-seven cases have been found. Quarantine has been established and vaccination ordered.

Changes in State Health Board.—At the meeting of the State Board of Health in Nashville, March 1, Dr. R. Q. Lillard, Lebanon, was elected to succeed Dr. J. A. Albright, Nashville, as secretary; Dr. H. H. Shoulders, Nashville, was appointed assistant secretary; Dr. R. E. Fort, Nashville, was elected president to succeed Dr. T. E. Abernathy, Chattanooga, and Dr. A. M. Gamble, Maryville, was elected vice-president to succeed Dr. Louis Leroy, Memphis.

Antituberculosis Work.—The Davidson County Tuberculosis Hospital, near Nashville, is almost completed and will be ready to receive patients within the next two weeks.——The Chattanooga Antituberculosis Association has decided to establish a sanatorium on Stringer's Ridge and the work will be commenced April 1. A number of lean-tos will be erected, each of which will accommodate eight patients. The first building to be erected will be the administration building and the other buildings of the group which include the dispensary, kitchen, laundry, dining-room, etc., will next be made ready.

WISCONSIN

Small-Pox at Merrillan.—The schools of Merrillan are reported to have been closed on account of small-pox.

New Officers.—Langlade County Medical Society: president, Dr. Michael J. Donohue; secretary and treasurer, Dr. John C. Wright, both of Antigo.

Hospital Notes.—Dr. Joseph Schneider, Milwaukee, has purchased land near the courthouse, on which he will erect a free hospital for diseases of the eye.——The county board of Racine County has appropriated $10,000 for a county tuberculosis sanatorium.——The out-patients' department of St. Mary's Hospital, Milwaukee, has been opened and the staff appointed. The following officers of the staff have been elected: president, Dr. James A. Bach; vice-president, Dr. Arthur T. Holbrook, and secretary, Dr. Hans Reinhardt.——

At the annual meeting of the Beloit Hospital Association, the expenditures were shown to have exceeded the receipts by only $1,000, which is a relatively favorable showing. The following officers were elected at the meeting: president, Dr. Arthur C. Helm; vice-president, Dr. William J. Allen; secretary, Dr. Myron G. Spawn, and treasurer, Dr. Ernest C. Helm, all of Beloit.

GENERAL

Change in Editor.—Prof. Selskar M. Gunn, assistant professor in the department of biology and public health in the Massachusetts Institute of Technology, has been appointed editor of the *Journal of the American Public Health Association*, vice Burt R. Rickards, resigned.

Another Leper.—Medical affidavits were sent to Congress March 7, by the chairman of the board of supervisors of Stockton County, California, showing that Edward Fickert, a veteran of the Spanish-American War, is afflicted with leprosy and is in quarantine at the County Hospital.

Conservation of School Children.—A conference for the conservation of school children, under the auspices of the American Academy of Medicine, will be held in Drown Memorial Hall, Lehigh University, South Bethlehem, Pa., April 3 and 4. The subjects to be considered by the conference are deficient and backward children, conservation of school children, the teaching of hygiene and medical inspection.

Urges Naval Medical Reserve Corps.—Rear Admiral Charles F. Stokes, Surgeon General of the Navy, in an address before the Medical Society of the District of Columbia, February 21, advocated the establishment of a medical reserve corps for the Navy, similar to that established recently in the Army, that in case of necessity the government might have a sufficient number of physicians conversant with the technical details of the service.

First Aid.—A journal known as *First Aid*, the official organ of the First Aid Association of America, has appeared, with headquarters at Arlington, Mass. The first number contains a tribute to Clara Barton, a brief report of the sixth annual meeting, notice of the establishment of the international committee, the announcement of the appointment of Dr. Frederick H. Moss, Boston, as the head of the medical department, and reports of subordinate organizations.

Delegates to Tuberculosis Congress.—Dr. Henry Barton Jacobs, Baltimore, secretary of the National Association for the Study and Prevention of Tuberculosis; Dr. Livingston Farrand, Boonton, N. J., executive secretary of the association; Dr. Charles L. Greene, St. Paul; Dr. G. Walker Holden, Denver; Dr. Gerald B. Webb, Colorado Springs, and William H. Baldwin, Washington, all directors of the national association, have been delegated to represent the United States at the seventh international congress on tuberculosis, to be held in Rome, April 14-20.

Bequests and Donations.—The following bequests and donations to hospitals are announced:

Thomas Morgan Rotch, Jr., Hospital, Boston, $1,000, by the will of Joanna Rotch, Milton, Mass.

Lafayette, Ind., Home Hospital, $100,000, by the will of John Peter Kile.

Roosevelt Hospital, New York City, $15,000; Presbyterian Hospital, New York City, $1,000, by the will of Margaret E. Mitchell.

Tuberculosis Preventorium for Children, Farmingham, N. J., $1,000, donation from Eugene Meyer.

German Hospital, New York City, $2,000; St. Mark's Hospital, St. Francis Hospital and German Poliklinik, New York City, each $1,250, proceeds of the German Charity Ball.

Albany Hospital, $10,000, by the will of Anderson D. Lawrence.

Bushwick and East Brooklyn Dispensary, $20,000; Brooklyn Home for Consumptives and German and Brooklyn Hospitals, $5,000 each, by the will of Henry Batterman.

German Hospital, New York City, $5,000, from the Ladies' Aid Society, to endow a free bed.

FOREIGN

Death of Negri, of Rabies Fame.—Professor A. Negri of the University of Pavia, Italy, has died. He discovered in the tissues of rabies the bodies called by his name which permit the early diagnosis of the disease. Negri also demonstrated that malaria can be eradicated by thorough treatment between epidemics of those affected.

Preventive Medicine in the Italian-Turkish Campaign.—When the Italians occupied Tripoli, cholera and malaria were found prevailing, as many as 130 native victims of cholera being buried in one day. Vigorous measures were instituted at once by the Italian medical officers. Temporary hospitals and two bacteriologic stations were erected and the medical corps, aided by the Italian Red Cross, soon had the cholera sick isolated and all arrangements made for taking care of the corpses to prevent contagion. The epidemic was soon under control and is now practically stamped out, according to a communication published in the *Policlinico*, February 18. The medical chief of staff, General Sforza, had lemons given out daily to all the soldiers, and each was given a piece of phenolized soap and was required to wash his hands with it before eating, and to singe in a flame the spoons, fork and knife. Soldiers were not allowed to eat dates or other food bought of strolling peddlers. They were required to refrain from excesses in eating and drinking, especially from liquor, and to wear a piece of flannel over the abdomen to prevent local chilling. They were forbidden further to use water taken from wells without first adding to it from fifteen to twenty drops of tincture of iodin to each liter, or bromin tablets. Each corps was provided with Berkefeld filters and the water of the various fountains was tested, and if found suspicious its use was forbidden. About four hundred casks, each with a capacity of 400 liters, were distributed at various points and kept filled with pure water from the Serino. Then pumping engines were set to work at the wells outside the city which supply pure water, and piping was laid as the old surface method of bringing the water to town was defective. All persons arriving in the city were subjected to a medical examination, and the food supplied the soldiers was kept at a high standard both in regard to quality and quantity and the soldiers were supplied freely with clean clothing, etc. A few cases of small-pox having been discovered, the entire population, civil and military, was vaccinated and there have been no further cases. The prophylaxis of malaria was energetically carried on, not only by screening the barracks and giving quinin systematically but by digging a straight channel for the water courses, thus draining the swamps, while stagnant water was coated with oil. Eighty of the 150 cases of malaria were recurrences of malaria contracted in Italy. These malarial soldiers were given vigorous quinin treatment and then sent back to Italy, so that they would not infect the mosquitoes. Prophylaxis of venereal diseases was mainly by medical inspection of prostitutes, a hospital with thirty beds and a dispensary being set aside for those with venereal disease. The health of the troops is said to be excellent, actually averaging better than in army circles in Italy. Admissions to the hospital are rare and deaths are extremely infrequent. The United States, it will be remembered, was at war with Tripoli in 1801-1805, and the city of Tripoli is generally cited as an example of an African hotbed of disease and insanitation, although much has been done to improve it in the last few years.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 2, 1912.

A Section of the History of Medicine at the International Medical Congress

The program of the International Medical Congress which is to be held in London in 1913 has been already given in a previous letter to THE JOURNAL. It was originally intended that there would be twenty-two sections, which seemed to include all the possible specialties into which medical science could be divided. The establishment of yet another section, one on the history of medicine, is, however, to be recommended to the permanent commission by the executive committee.

Discovery of the Development of the Parasite of Kala-Azar

Surgeon-General Bannerman, I.M.S., late director of the Bombay Bacteriological Laboratory, and now of the Madras presidency, has telegraphed to Prof. Sir Ronald Ross of the Liverpool School of Tropical Medicine, that Capt. W. S. Patton of the Indian Medical Service, assistant director of the King Institute of Preventive Medicine, Madras, has discovered the complete development of the parasite of kala-azar in Indian and European bedbugs. This disease is very deadly in southern Europe, the Sudan and tropical Asia, and many efforts have been made during the last five years to find the mode of its transmission. Kala-azar was long regarded as a peculiarly deadly form of chronic malaria, causing chronic irregular fever, enlargement of the spleen and liver, great wasting, and, in perhaps ninety-nine out of every 100 cases, death. It was, and is, endemic in China, India, the Sudan, and probably other tropical regions; in fact, cases have been known in some of the Greek islands, and even in Sicily. In Assam some years ago it appeared as an epidemic, and spread slowly up the Brahmaputra Valley, killing practically the whole population

in village after village, and receiving the name "kala-azar," or black fever. Sir William Leishman of the Army Medical School discovered the parasite of the disease in human tissues, and it was evidently quite unlike the parasite causing malaria. Captain Patton, after experiments with various animals, found that the parasite reached a certain degree of development in the stomach of the bug, which he suggested might be the transmitter of the disease; but he also proved that the parasite could be developed to a similar stage in a test-tube. Moreover, Dr. Wenyon of the London School of Tropical Medicine has shown that similar developments can be reached in the stomach of a mosquito (*Stegomyia fasciata*). All that has been certain hitherto is that the disease is probably transmitted by a blood-sucker or dirt-eater, such as a bug, mosquito, tick, flea, louse or fly.

An American investigator, Dr. Wright, has made the curious discovery that the same parasite, or one almost exactly like it, is responsible for the disease known in the various parts as the Sind sore, Delhi boil, Bagdad boil, or *bouton d'orient*—an ulcer which sometimes reaches a diameter of 3 or 4 inches; lasts five or ten months, heals gradually and leaves the patient proof against future attacks.

Leprosy in London

The discovery that a leper, an inmate of one of the London infirmaries, had left the institution and that his whereabouts could not be traced has given rise to some alarm. It was subsequently discovered that he had died from chronic bronchitis. The local government board has issued a request for full information of every case of leprosy in the British Isles. There are probably always twenty to thirty cases of leprosy in London. The lepers live at home and move about unrestricted, the existence of the disease being quite unknown to the people with whom they come in contact. There appears to be no danger whatever of contagion, for no cases of transmission have come to light.

Prohibition of the Use of Preservatives in Milk

The local government board has drafted regulations prohibiting the use of preservatives in milk and defining the conditions under which they may be used in cream. These regulations apply not only to milk and cream produced in this country but also to that imported from abroad. The board appears to have been guided to a certain extent by the recommendations of a committee appointed in 1901, which recommended that the addition of preservatives to milk should be made an offense and that only boron preservatives should be allowed in cream in an amount not exceeding 0.25 per cent. Under the term "milk," to which the prohibition applies, are included separated, skimmed, condensed and dried milk, but as the sale of condensed milk would be seriously impeded if the use of sugar were prohibited it is provided that "neither cane nor beet sugar shall be regarded as a preservative." With regard to cream, there must not be added to it any thickening substance or any preservative, if the cream contains less than 40 per cent. of milk fat. To cream which contains this percentage of fat or more the only preservatives which are allowed are (1) boric acid, borax, or a mixture of these, or (2) hydrogen peroxid, in an amount not exceeding 0.1 per cent. by weight. Dealers in cream must state on the label that the cream is preserved and name the preservative. In tea-shops and other refreshment rooms it will not be necessary to label the cream-jugs if a conspicuous notice is displayed in each room stating that the cream used is preserved, or if this is stated on the bills of fare.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 23, 1912.

A Death from Salvarsan

At the last session of the Société française de dermatologie et de syphiligraphie, Dr. Balzer, physician of the Paris hospitals, and Mlle. Coudat reported a case of a patient who had a chancre on the chin and mucous plaques in the throat, but no other apparent lesions. He received a first injection of 0.3 gm. of salvarsan; a little fever and some nausea resulted. A second injection of 0.3 gm. made a week afterward produced no trouble until four days later, when delirium appeared with carphology, inequality of the pupils, stiffness of the neck and epileptiform convulsions. A lumbar puncture drew out a liquid rich in albumin and poor in leukocytes. The patient fell into coma and died on the third day. A second lumbar puncture showed arsenic in the cerebrospinal fluid.

Nine other patients who had received injections at the same time as the previous patient had no complications. The solution, therefore, cannot be blamed. Dr. Balzer believes that there is an unequal distribution of arsenic in the system, the nervous centers having an especial affinity for this product.

Deaths

The deaths are reported of Dr. Etienne Cestan, professor of the surgical clinic at the Faculté de médecine de Toulouse, and of Dr. Charles Guende, professor of the ophthalmologic clinic at the Ecole de médecine de Marseille.

Measures Against Alcoholism

The Chamber of Deputies recently passed on a project to limit the number of licenses to sell liquor. Unfortunately, since the wine merchants are politically important, the majority of the deputies, 361 against 155, defeated this limitation. This vote made a strong impression on public opinion and especially on the medical profession. It is to be hoped that our deputies may soon take the opportunity to rehabilitate themselves. The chamber is soon to consider a bill to prohibit absolutely the transportation and sale of absinthe. M. Schmidt, deputy from the Vosges, has made a report on this question showing that the consumption of absinthe has made alarming progress.

It is in the departments of the south that the most absinthe is consumed. These departments represent 23.5 per cent. of the total population of the country, but they consume 65 per cent. of the total amount of absinthe used. The sober region; that is to say, where the consumption of alcohol, bitters and absinthe is the lightest, includes the departments of the southwest. The population there is 12 per cent. of the total population. In these three regions the proportion of insane or victims of alcohol are given in the following figures calculated per 10,000 inhabitants:

	Men	Women
Sober region	0.85	0.26
Region addicted to alcohol	2.23	0.90
Region addicted to absinthe	2.24	1.22

Moreover the alcoholic insane may be classified as follows, according to the drink that they consume:

0.26 per cent. habitually drink	absinthe.
2.53 " " "	other aperients.
5.51 " " "	sweetened liquors.
53.20 " " "	brandies, etc.
2.53 " " "	cider.
0.31 " " "	beer.
22.57 " " "	wine.

It appears also from M. Schmidt's report that violence and juvenile criminality increases with the consumption of alcohol and spirits. Classifying by regions the murders and murderous assaults for the three periods of 1874 to 1884, 1884 to 1894 and 1894 to 1904, the following is obtained:

	Sober Region	Region Addicted to Alcohol	Region Addicted to Absinthe
Murders 1874-1884	0.24	0.44	0.89
Murders 1884-1894	0.22	0.53	1.03
Murders 1894-1904	0.30	0.52	1.20
Murderous assaults, 1874-1884	0.26	0.28	0.38
Murderous assaults, 1884-1894	0.25	0.35	0.49
Murderous assaults, 1894-1904	0.18	0.41	0.51

French Universities and Foreign Countries

The professors of the University of Dijon have just unanimously passed a resolution calling for a university congress to organize the French universities more closely and to extend their influence abroad. There has just been founded under the auspices of the France-Amérique committee (THE JOURNAL, Feb. 12, 1910, p. 549) a league to foster French interests in America, which has for one of its objects to make known to the public of the two Americas the value of our general culture and practical instruction.

Reopening of the Medical School

The Faculté de médecine has been opened to the students of the first and second year from the first of March.

The Enrolment of Weaklings in the Army

M. Quesnel, senator of the Seine-Inférieure, called the attention of the minister of war to the disadvantages of the enlistment of unfit men in the army, which causes the return to their families of 20,000 enlisted men per year. The minister admitted that the temporary enlistment of men unfit

for military service should be avoided. He is, therefore, considering a bill for the formation of two or more councils of revision in departments where such a measure may be warranted by the large number of young men recommended for return to civil life on account of physical unfitness. Meanwhile, the minister has ordered improvement in examination.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb. 23, 1912.

Personal

Professor Bonhöffer of Breslau has accepted the chair of neurology in Berlin as the successor of Professor Zieben.

Professor Golgi of Pavia has been elected corresponding member of the Royal Prussian Academy of Sciences.

Professor Hermann, the physiologist of Königsberg, and Professor A. Kossel of Heidelberg have been elected as honorary members of the Belgium Academy of Sciences.

A few days ago Professor Finkler, formerly professor of hygiene at the university of Bonn, died at the age of 59. He was formerly assistant of Pflüger and joined the Bonn faculty in 1877, becoming assistant of Professor Rühle, and director of the clinic for internal medicine, and he conducted the medical policlinic from 1888 to 1893. By appointment of the minister of medical education, he represented the German universities at the world's fair in Chicago. After the close of the fair he spent a long time in America for purposes of study. On his return he became professor extraordinary of hygiene in Bonn, and in 1895 a regular professor. Corresponding to his varied training, his scientific works pertain to the fields of physiology and also clinical medicine and hygiene. Of his clinical articles his large work on acute inflammations of the lungs is worthy of notice. Among his bacteriologic articles, that on the cholera vibrio redounded less to his credit, as on account of it he came into conflict with Robert Koch; the so-called Finkler-Prior vibrio proved not to be identical with the cholera bacterium. Of late years he had been interested in the production of a cheap albumin food preparation. In this way he became the originator of tropon, the well known foodstuff prepared from the meat residues of the meat extract manufacture. He had already resigned his position on account of illness, and Professor Kruse, who was his assistant for many years, had succeeded him.

Campaign Against Sleeping Sickness in German East Africa

The director of medical affairs in the imperial colonial office, Professor Steudel, has returned from his journey of investigation through the sleeping sickness district in German East Africa. He regards the outlook for overcoming sleeping sickness in East Africa as favorable. It is reported that a number of important scientific observations were made on his tour.

The Student Certificate of Dismissal Abolished

The difficulties, mentioned in my previous letter, between Hasse, the professor of anatomy at Breslau, and the students has been terminated by the minister of education. The strike of the students, as was to be expected, has been condemned by the minister, but, as a matter of fact, their demand was granted, for the department has organized a parallel course in anatomy. It will be no mistake to consider this innovation as the beginning of the end of Professor Hasse's teaching. This strife has brought about a very satisfactory important innovation. The starting point of the conflict, which as is well known, consisted in the fact that Hasse refused to give a number of students whom he disliked their certificate of dismissal, has given the department occasion to investigate anew the entire arrangements for giving certificates, and the result of this investigation was naturally the decision that the certificate of dismissal shall be abolished in future in the Prussian universities. From now on it is only necessary that the university instructor shall certify to the students who are attending his lectures at the beginning of his course, and no longer at the end. Originally the latter arrangement was made in order to hold the student to a diligent attendance on the lectures, for the right was given to the university instructor to refuse the certificate of dismissal to those students who he knew had not regularly attended his lectures. Everyone knew that this rule was chiefly important for the small universities. Even in the medium-sized universities, but still more in the large universities, it is, as may easily be understood, impossible for most university instructors to keep a record of the individual students among their crowd of hearers and, as experience showed, it not rarely happened that of all the lectures of a professor a student attended, only the first and last for the purpose of getting his certificate of entrance and dismissal. Indeed, in some cases even this was not necessary; not infrequently it happened that a student got himself represented at these formalities by a comrade, who did not even have to belong to the same department of the university.

A New Woman Professor

Mrs. Rabinowitsch-Kempner of Berlin has received the title of professor. The new professor, who moreover is not a physician but a zoologist, was director of the bacteriologic laboratory at the Woman's Medical College, Philadelphia, 1896-8. In scientific circles she has received a well deserved recognition by a large series of bacteriologic studies which she carried on especially under the direction of Robert Koch in the institute for infectious diseases of this city. After the death of Koch, she left this institution (it is said as a result of differences between the director and her husband, who also worked in the institute), and took up work in the pathologic institute conducted by Professor Orth. While Mrs. Rabinowitsch is not the first woman in Germany who has received the title of professor, still this distinction is noteworthy. (Her predecessors are a woman anthropologist in Kiel and a zoologist in Bonn.) The distinction may be regarded as a product of our woman's movement and this also in a personal sense, since, as I happen to know, certain Berlin ladies of great social influence have taken great pains to secure the conferring the title of professor on Mrs. Rabinowitsch-Kempner, appealing to the authorities in the department of education. A peculiar relation between husband and wife is created by this appointment, as the husband has merely the title of doctor of medicine. With us it is the well known custom for the wife to be called by the title of the husband (for example, Frau Professorin); perhaps it will come to pass under the influence of the woman's movement that women will so frequently receive higher positions than their husbands that the men will be contented to bear the titles of their wives. Although it is not gallant as a rule to betray the age of a lady, we will, it is to be hoped, not draw down on us the wrath of our new professoress when we state that Mrs. Rabinowitsch-Kempner was born in 1871, and is therefore now at the age of 40.

Improvement in the Milk Trade

A meeting of the German agricultural council, a few days ago, took up the objectionable features that have developed in the milk business, and made plans for their improvement. The amount of cow's milk produced annually by German agriculture is estimated at 21,000,000 liters. In Berlin in 1894 there were consumed daily 0.24 and annually 81 liters per capita, and in 1910 0.32 daily and 117 liters annually. In order to counteract the abuses that have been disclosed in the sale of cow's milk and the associated damage to the interests of agriculture, a sketch of a law was proposed by which the conditions for the trade in milk should be made as far as possible uniform throughout the entire German empire. The details of this plan were entrusted to a committee.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Feb. 23, 1912.

Endeavors to Regulate Medical Fees

There is at present no fixed tariff for medical fees in this city, and, therefore, it often happens that the public and their medical advisers differ in opinion as to the proper fees to be paid for medical services. The practitioners also resent the fact that specialists, especially those who are just at the beginning of their career as docents, are very moderate in their charges. Therefore in one of the Vienna medical societies the suggestion was thrown out that a new tariff binding on all practitioners should be worked out and that a minimum fee for specialist's services should be fixed, with a specified sliding scale, according to the nature, the time and quality of the medical intervention. The tariff should be promulgated by the Medical Council, which already now is recognized by the public as the judge in all conflicts arising out of the abovementioned conditions. With the increased cost of living, which may be safely estimated at 30 per cent. during the last five years, the present fees are not what they ought to be: a compensation for time and services. Another point was raised in the discussion: The payment of the practitioner should not be simply a matter of so many visits at a certain figure per visit, but it should be fixed according to the actual service rendered to the patient. If a doctor treated and cured, for

instance, a patient with a severe case of pneumonia or otitis media or angina or typhoid, he should be entitled to an inclusive fee, just as well as the surgeon operating on a hernia or tumor or an appendicitis, or for an amputation. This view is gaining ground slowly among the profession here, but the public is not yet "up to it."

Unveiling of a Tablet in Memory of the Late Professor Escherich

A few days ago a memorial tablet for the late specialist in diseases of children, Professor Escherich, was unveiled in the Home for the Protection of Infants (Säuglingsschutz), of which this scientist was the chief founder and first director. This tablet is only the forerunner of a larger memorial to be created shortly in the clinic for children's diseases. At the above-mentioned ceremony, a numerous gathering of former pupils and collaborates of the deceased, from both the clinic and the Säuglingsschutz, paid due homage to the memory of their beloved teacher.

Reception on Account of Washington's Birthday

As usual the American ambassador gave a reception on Washington's birthday in his fine residence in this city, which was attended by some 300 Americans just now staying here. A fair percentage of the guests belonged to the American Medical Association of Vienna, that lively, flourishing and most useful association of eminently practical doctors who control, one may say, the entire postgraduate work in the Vienna hospitals as far as classes given in the English language are concerned.

An Outbreak of Microsporon Disease in Vienna Schools

For about two years, there has appeared in the schools of this city a disease of the hair of the scalp which formerly had not been known here. It is the same epidemic which has been observed and studied in Paris and the etiology of which has been traced to a microsporon. Professor Riehl, head of the clinic for dermatology, lectured before an audience of officers of public health on the results of his investigations conducted on about 1,000 children affected by the disease. He thinks that prophylactic measures are simple and efficient, and that by a little care propagation is easily stopped. To attain this result, however, early recognition is important. The scattered areas of broken hair, the whitish scutula-shaped scales on the head are not to be forgotten if once seen. In his experience, *x*-rays and disinfection by an antiseptic hair-wash gave excellent results, and he found that children of all classes and all standards of life were affected. In order to stamp out the disease, cooperation of teachers, doctors and hospitals was indispensable, as otherwise the expensive treatment could not be carried out in many cases of reduced means. Segregation of infected children Professor Riehl did not think necessary, as a well-fitting dressing of the head was sufficient to prevent any transmission.

Marriages

JOSEPH ARLISS WORTHINGTON, M.C., U. S. Army, to Miss Aileen Therese Martin of East Orange, N. J., at Monterey, Cal., February 19.

WILLIAM K. LOUGHRIDGE, M.D., Portland, Ore., to Miss Myrtle Claire Lester of Walla Walla, Wash., February 16.

OSCAR BERNHARDT LAMBERT, M.D., Escanaba, Mich., to Miss Clare Frances Engelhardt of Milwaukee, Wis., March 4.

ARTHUR EDWARD EWENS, M.D., Atlantic City, N. J., to Miss Florence Lane Johnson, at Atlantic City, February 27.

JOHN CARL HILL, M.D., Boise, Ida., to Miss Elizabeth Whitehill of Morgantown, W. Va., February 20.

GREGORY L. HIGGINS, M.D., Sayre, Pa., to Miss Estelle M. Arnold of Mercersburg, Pa., February 23.

WALTER JACOB BRUNNER, M.D., Westfield, Ia., to Miss Edith Gillin of Sioux City, Ia., February 21.

ROBERT W. DUNLAP, M.D., Shantung, China, to Miss Alice L. Logan of Pittsburgh, February 8.

ROCHE W. HOGEBOOM, M.D., to Miss Cornelia L. Hall, both of Springfield, Mo., February 17.

CHARLES LINDLEY STEER, M.D., to Miss Mary E. Vandeven, both of Lima, O., March 5.

MICHAEL J. DOWD, M.D., to Miss Agatha Prichard of Greeley, Neb., February 20.

Deaths

Leonard Weber, M.D. University of Erlangen, Germany, 1860; a member of the American Medical Association; professor emeritus of general medicine in the Post-Graduate Medical School, New York City; one of the founders and first president of St. Mark's Hospital; formerly visiting physician to St. Francis' Hospital; died at his home in New York City, March 1, from heart disease, aged 74. At a meeting of the board of directors of the Post-Graduate Medical School resolutions of eulogy and regret were adopted.

Henry Nelson Winton, M.D. University of California, San Francisco, 1885; Jefferson Medical College, 1889; for the last two years head of the department of chemistry of the Oakland College of Medicine and Surgery, and for fifteen years prior to that time professor of medicine in the University of California; died at the Oakland College of Medicine, February 20, from heart disease, aged 49.

Robert W. Walmsley, M.D. Tulane University, New Orleans, 1881; of New Orleans; formerly a member of the American Medical Association; a specialist in physical diagnosis; for seventeen years surgeon for the New Orleans Railway Company and for several years a member of the surgical staff of the Charity Hospital; died in New Orleans, February 27, several days after a surgical operation, aged 55.

Raymond J. Powers, M.D. Marion-Sims College of Medicine, St. Louis, Mo., 1895; a member of the American Medical Association and a practitioner of Ogden, Utah, for forty-five years, and member of the Board of Health and city council; formerly president of the Weber County Medical Society; a veteran of the Civil War; died in the Dee Memorial Hospital, Ogden, February 21, from senile debility, aged 66.

Joseph J. McCoy, M.D. Western Reserve University, Cleveland, 1881; a member of the American Medical Association and for several years a member and clerk of the school board of Steubenville, Ohio; local surgeon of the Wheeling and Lake Erie, Wabash, Pittsburgh Terminal, and Steubenville, Marietta and Ohio Valley Railroads; died at his home February 21, from angina pectoris, aged 55.

Elmer Brown Borland, M.D. Western Pennsylvania Medical College, Pittsburgh, 1887; a member of the American Medical Association and formerly professor of hygiene and dietetics in his alma mater; active in the campaign against tuberculosis; formerly a practitioner of East End, Pittsburgh, and later a resident of Edgewood; died in that place, February 24, from heart disease, aged 50.

August C. Schnetzler, M.D. Toledo (Ohio) Medical College, 1898; for seven years a practitioner of Toledo; assistant surgeon Cincinnati, Hamilton and Dayton Railroad; physician to St. Vincent's Hospital and a member of the associated staff of the Toledo Hospital; thereafter a resident of Los Angeles, Cal.; died at his home in that city, February 21, from tuberculosis.

William Thomas Kensett, M.D. University of Vermont, Burlington, 1894; for six years a medical missionary of the Methodist Episcopal Church in the Malay Peninsula and later a practitioner of Bakerstown and Pittsburgh, Pa.; a member of the staff of the Pittsburgh Free Dispensary; died at his home in Pittsburgh, March 3, from pneumonia, aged 45.

Henry Sinclair Castleman, M.D. College of Physicians and Surgeons, Baltimore, 1882; a member of the West Virginia State Medical Association; who underwent operation in a Baltimore hospital several months ago and who had not regained his former health and strength; died suddenly at his office in Martinsburg, March 1, from heart disease, aged 53.

Calvin Brooks McQuesten, M.D. Dartmouth Medical School, Hanover, N. H., 1864; acting assistant surgeon U. S. Army in 1864 and 1865; a practitioner of New York City for more than thirty years, but for ten years a practitioner of Hamilton, Ont., his native city; died suddenly while being taken to the Hamilton City Hospital, February 19, aged 74.

Henry C. Lapp, M.D. University of Buffalo, N. Y., 1865; a member of the Medical Society of the State of New York and the Gross Medical Club; for twenty-five years a member of the Buffalo Normal School Board and for thirty years of the Clarence School Board; died at his home in Clarence, March 1, from heart disease, aged 76.

Amos Graves, M.D. Tulane University, New Orleans, 1868; a member of the State Medical Association of Texas and Bexar County Medical Society; medical director of the San Antonio and Aransas Pass Railway; died at his home in San Antonio, March 9, from acute nephritis.

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Joshua Francis Lewis, M.D. Harvard Medical School, 1887; of Malden, Mass.; for twenty-four years a member of the State Board of Charity and deputy superintendent and superintendent of the adult poor; died at the Massachusetts General Hospital, Boston, February 26, from heart disease complicating asthma, aged 57.

Nathaniel H. McGirk, M.D. St. Louis Medical College, 1858; surgeon in the Confederate service throughout the Civil War; for twenty years government physician on the Island of Trinidad and for more than twenty years a practitioner of Pleasanton, Texas; died at his home, February 2, from pneumonia, aged 83.

Isaac Newton Grubb, M.D. New York University, New York City, 1869; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War and for several years a school director and member of the common council of Thompsontown; died at his home, February 9, from pneumonia, aged 71.

Henry Shaw Etheridge, M.D. Eclectic Medical Institute, Cincinnati, 1861; a member of the Medical Society of Virginia; a Confederate veteran; a member of the board of supervisors and physician to the poor of Norfolk County, Virginia; died at his home in Port Norfolk, February 24, from pneumonia, aged 72.

Jean Baptiste Vinceslas Chagnon, M.D. New York University, New York City, 1860; McGill University, Montreal, 1861; one of the most esteemed French-Canadian physicians of New England; for more than thirty years a practitioner of Fall River; died at his home, February 22, from cerebral hemorrhage, aged 74.

John William Parsons, M.D. Harvard Medical School, 1865; a member of the American Medical Association and a trustee and member of the staff of Portsmouth (N. H.) Cottage Hospital; a surgeon of volunteers during the Civil War; died at his home in Portsmouth, February 28, from pneumonia, aged 70.

John Miller Moore, M.D. New York University, New York City, 1891; who entered the United States Navy in 1892; was made surgeon in 1905 and left the service three years later, is reported to have been found dead in bed at a hotel in New York City, January 29, from heart disease and suffocation, aged 43.

Adolph Feldstein, M.D. University of Prague, Bohemia, 1864; elected treasurer of the Philadelphia Jewish Hospital in 1865; resident physician until 1873, superintendent from 1873 to 1876; visiting physician to the institution from 1876 to 1909; died at his home in Philadelphia, February 28, aged 71.

William Monroe Moore, M.D. Bellevue Hospital Medical College, 1896; founder of the Buffalo Park Sanitarium, Pawnee, Okla.; died at his home in that city, February 21, from the effects of a gunshot wound of the brain, believed to have been self-inflicted with suicidal intent, aged 50.

James H. Hewitt, M.D. University of Buffalo, N. Y., 1865; surgeon of the One Hundred and Forty-Seventh Pennsylvania Volunteer Infantry during the Civil War; for more than forty years a practitioner of Summerfield, Ill.; died at his home in Lebanon, Ill., February 25, aged 71.

Arthur Kendrick MacDonald, M.D. University of Pennsylvania, Philadelphia, 1875; for many years official physician and medical adviser to the Princeton (N. J.) University Athletic Association; died at his home in Princeton, February 28, from heart disease, aged 60.

Leon Millard Fleming, M.D. Long Island College Hospital, Brooklyn, N. Y., 1887; head of the medical department of the Pullman Palace Car Company; formerly a practitioner of Brooklyn; died suddenly at his home in Chicago, February 23, from heart disease, aged 45.

Joseph Lawrence Nevin, M.D. New York Homeopathic Medical College, New York City, 1878; for more than thirty years a practitioner of the Hudson Heights section of Jersey City, N. J.; died in a hospital in New York City, February 20, from peritonitis, aged 58.

John Loring Furber, M.D. American Medical College (Eclectic) Cincinnati, 1857; formerly chairman of the committee of medical legislation in Kansas for the national and state eclectic associations; died at his home in Blackwell, Okla., February 19, aged 75.

Sarah Fitzwater Tyson, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1889; a member of the Medical Society of the State of Pennsylvania; died at her home in Norristown, March 2, from heart disease, aged 50.

M. E. Augustus McKechnie, M.D. Louisville (Ky.) Medical College, 1897; formerly a member of the American Medical Association; at one time health officer of Seattle; died at a hospital in Vancouver, B. C., February 22, from nephritis, aged 51.

William Raymond Hitchcock, M.D. New York University, New York City, 1898; assistant surgeon to the New York Orthopedic Hospital and Dispensary; died at his home in New York City, February 25, from pneumonia, aged 41.

Martin H. Mayfield, M.D. St. Louis College of Physicians and Surgeons, 1893; formerly of Springfield, Mo.; and a member of the American Medical Association; died at his home in Hollis, Okla., March 1, from nephritis, aged 49.

John A. Luther, M.D. American Eclectic Medical College, Cincinnati, 1879; a veteran of the Civil War; for nearly half a century a practitioner of Scalp Level, Pa.; died at his home, February 20, from cerebral hemorrhage, aged 65.

James R. Williams (license, Washington, 1890); formerly a member of the American Medical Association and Kentucky State Medical Association; died at his home in Renge, Wash., February 20, from cerebral hemorrhage, aged 43.

Charles H. Jones, M.D. Southern Medical College, Atlanta, Ga., 1880; formerly mayor and chairman of the board of health of Dahlonega, Ga.; died at his home in that city, February 21, from cerebral hemorrhage, aged 56.

Josiah Hamilton Goddard, M.D. College of Physicians and Surgeons, New York City, 1861; a member of the Massachusetts Medical Society; died at his home in Orange, February 21, from cerebral hemorrhage, aged 81.

Walter Forward Reynolds, M.D. Rush Medical College, 1875; a member of the Nebraska State Medical Association and for many years a practitioner of York; died at his home in Huntington Beach, Cal., February 24, aged 66.

Severn Parker Nottingham, M.D. Jefferson Medical College, 1861; surgeon in the Confederate service throughout the Civil War; died at his home in Eastville, Va., February 20, from cerebral hemorrhage, aged 71.

Andrew Hull Parker (license, Illinois, years of practice, 1883); of Evanston; for forty-five years a practitioner of Chicago; died in the Evanston Hospital, February 29, after a surgical operation, aged 77.

James H. Noble, M.D. Hahnemann Medical College, Chicago, 1871; of Eau Claire, Wis.; senator from the Twenty-Fourth Wisconsin District from 1905 to 1907; died in Roswell, N. Mex., March 1, aged 61.

John Henry Baker Denton, M.D. New York University, New York City, 1871; of Freeport, Long Island, N. Y.; at one time president of the school board; died in St. Petersburg, Fla., February 26, aged 61.

Hugh Thompson Kirby, M.D. Medical College of the State of South Carolina, Charleston, 1907; a member of the South Carolina Medical Association; died at his home in Loris, February 25, aged 28.

Lee McAuley, M.D. Missouri Medical College, St. Louis, 1898; a member of the Illinois State Medical Society; formerly of Grafton, Ill.; died at his home in Hardin, Ill., February 21, aged 48.

Frank G. Burnett, M.D. New York University, New York City, 1885; a member of the Rhode Island Medical Society; died suddenly at his home in Pawtucket, March 3, from heart disease, aged 51.

John Patrick Curley, M.D. Harvard Medical School, Boston, 1878; of Newport, R. I.; died in SS. Peter and Paul Rectory, Fall River, Mass., February 20, from nephritis, aged 55.

Amanda Harriett Kempton, M.D. Boston University School of Medicine, 1882; of Newport, N. H.; died recently and was buried in Newport, February 17, aged 74.

Erastus L. St. John, for forty-eight years a practitioner of Ohio; died at the home of his son in Cleveland, January 21, from senile debility, aged 77.

James B. Hanna, M.D. University of Louisville, Ky., 1870; died at his home in Bethpage, Tenn., February 24, from cerebral hemorrhage, aged 64.

Edwin Greene, M.D. Kentucky School of Medicine, Louisville, 1882; the oldest physician of Arcadia, Fla.; died at his home, February 24, aged 65.

James Reagan Jump, M.D. Tennessee Medical College, Knoxville, 1896; died at his home in Lenoir City, Tenn., February 23, from tuberculosis.

Manley Clemont Warren, M.D. Jefferson Medical College, 1900; died at his home in Buchanan, Ky., February 20, aged 35.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

MARJORIE HAMILTON'S OBESITY CURE

A Dietless, Drugless System That Calls for Both Drugs and Dieting

Women's fashions in the past few years have had the effect of giving a wonderful stimulus to one branch of quackery—the "obesity cure" fakers. The desire to be slender—and slender to a degree often far beyond that compatible with good health—has caused thousands of women to throw away money on so-called reduction treatments that are either dangerous or worthless—sometimes both. Thyroid extract was the basis of many of the fat reducers first put on the market and is still used in some of them. The public has been fairly well educated to regard this powerful drug with suspicion and it is becoming increasingly difficult to sell remedies of this

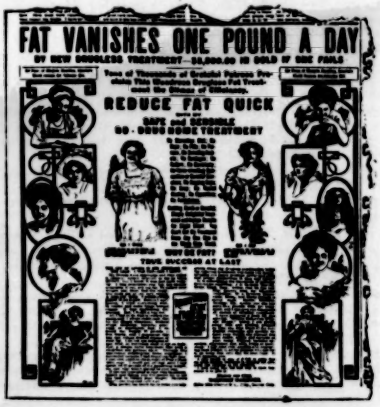
FAT VANISHES ONE POUND A DAY
BY NEW DRUGLESS TREATMENT—$5,000.00 NO GOLD OR COIN PILLS
REDUCE FAT QUICK
EAT and DOUBLE
DO DRUG SOME TREATMENT

Fig. 1.—Photographic reproduction of a quarter-page Marjorie Hamilton advertisement in the Chicago *Tribune*, Feb. 25, 1912.

type. Quackery, being nothing if not versatile, has taken advantage of the trend of public opinion to advertise "treatments" for obesity that are "drugless."

THE DISCOVERY

Marjorie Hamilton of Denver, Colo., calls herself a "specialist on the art of reducing superfluous flesh and double chin." She claims to be the "Originator of the Famous Quadruple Combination System of Fat Reduction" which is "perfectly simple" and "simply perfect." Marjorie Hamilton offers to make your "fat vanish one pound a day" and she urges you to "write her at once and learn the anguish she felt when her girlish beauty started to develop to abnormal proportions." Needless to say, Marjorie Hamilton, before discovering her marvelous "Quadruple Combination System," had tried everything in the obesity-cure line. They were all worthless, she says, including the treatments suggested by reputable physicians. This did not surprise her, however, for she has discovered that "most physicians are more or less [which?] subject to obesity than any other class."

Marjorie tells us, that, confronted by the hopelessness of all previous methods of fat reduction, she studied "into the long weary hours of night and tried experiment after experiment." Further, she says: "I began the study of every scientific volume I could lay my hands on regarding the cause of superfluous flesh." "At last with patient effort," she found what she sought, a "cure" for fatness, and she is willing to share her secret with others that are afflicted—price $15.00.

As a result of her scientific study, Marjorie Hamilton discovered the following basic fact:

"Fat, therefore, is simply thickened nutrition."

But the "Quadruple Combination System of Fat Reduction" has its limits; even its originator admits this: "Do not send for my treatment, if you wish to reduce more than seventy pounds." It is true that elsewhere in her advertising, Marjorie Hamilton offers to reduce your weight 150 pounds; but consistency is not to be expected in a mail-order faker.

As is usual in such cases, sales are stimulated by scare methods. That is to say, the fears of the obese are played on. The following silly falsehood, as an example:

"Any moment, without warning, the tight bands of fat around a fat person's heart are liable to clutch the heart, stop it from beating, and thus instantly end life. Fat people are continually dropping dead from heart strokes caused by fatty degeneration of the heart."

THE PERSONNEL

And here it is worth while, for the purpose of showing the ramifications of quackery, briefly to refer to the individuals that are conducting this fake. Marjorie Hamilton's name is Mrs. Walter C. Cuningham. In 1909, Cuningham with his previous wife, Evelyn, was conducting a mail-order bust-developer and wrinkle-eradicator concern in Chicago under the name of Evelyn Cuningham. At that time Marjorie Hamilton was the wife of the employee of a board-of-trade broker. In the latter part of 1910, W. C. Cuningham sold his interest in the Evelyn Cuningham Company and incorporated another bust-developing, wrinkle-eradicating and fat-reducing mail-order concern, the Della Carson Company, also of Chicago. Later, he disposed of this company also and, having obtained a divorce from Evelyn, married Marjorie Hamilton, who had in the meantime got a divorce from her husband. The two went to Denver where they organized Marjorie Hamilton, Inc. While Marjorie advertises that she is "at the head of this great business" and further brags that "no man bosses me," it is, of course, Cuningham who dominates the disreputable enterprise. So much for the personal elements of the story.

A FAMILY LIKENESS

In going over the advertising matter of the three companies—Evelyn Cuningham Co., Della Carson Co. and Marjorie Hamilton Co.—one finds some internal evidence of the connection between the three. For instance, this from one of Evelyn Cuningham's heart-to-heart letters (printed by the thousand) to a woman in need of a wrinkle eradicator:

"I do wish that I was master enough with the pen to bare my very soul to you so that you could see in all its nude horror the anguish women feel when unattractive."

And this from Marjorie Hamilton's booklet bewailing the lot of the fat woman:

"I do so wish that I was master enough with the pen to bare my very soul to you so that you might see in all its nude horror the anguish I felt when I was once fat and unattractive."

THE FABLE OF THE TWO FRIENDS

And again! Della Carson—who sold mail-order treatments for developing the bust—had, so she tells us, "a girlhood friend" who married. After a while the girl began to lose the freshness of her beauty. But let her tell it:

"The petals were falling from the flower of girlhood—and the evening of beauty had arrived. Little by little the husband paid less attention to his helpmeet . . . he was spending his evenings and his money on actresses [Presumably plump ones!—ED.]; he was haunting stage doors and the gaily-lighted cafés. He was drinking with women of the half-world—was throwing himself away in the revelry of dissipation."

This, if we are to believe Della, was the horrible position in which her "girlhood friend" found herself. The presumption is, of course, that had she sent for Della's bust developing "treatment" home would have been happy once more.

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Now, mark the coincidence! Marjorie Hamilton also had "a beautiful girl friend"—so she says. She, too, married but, unlike Della's friend, instead of losing in weight, she gained. "After two years of married life, she grew stout." The husband of Marjorie's friend, while evidently having a different standard of beauty from that held by the husband of Della's friend, was affected in a similar way. Thus, according to the booklet issued by Marjorie Hamilton:

"The petals began falling from this flower of girlhood and the evening of beauty had arrived. Little by little the husband paid less and less attention to her . . . He was spending his evenings and money on actresses [Presumably thin ones!—ED.]. He was haunting stage doors and gayly-lighted cafés, drinking with women of the half-world; was throwing himself away in the revelry of dissipation."

Here, of course, the presumption is, that all that was needed to win back the erring husband was for the neglected wife to send in $15 for Marjorie Hamilton's "Famous Quadruple Combination System of Fat Reduction."

The fitting climax to these two sad stories is thus portrayed—the wording is practically identical—both by Della Carson of Chicago in her booklet that was issued before Cuningham left Chicago and by Marjorie Hamilton of Denver in her latest pamphlet dealing with the suffering obese. The family likeness is strong:

THE PATHETIC CLIMAXES

WHAT DELLA SAID:

"It has been man's domain to abide by the law of selection—and he worships what he can see and what pleases him most. In the reaches of that Sargasso Sea of Wasted Life—the tenement sections of a city—we find no girlish beauty. The hovels are filled with the starving women who didn't care or couldn't understand—who believed that men love for the sake of the woman herself—and that the outward appearances mean but little. And over there in that grim building we call the morgue—solemn and shrunken and still on the marble slabs—are the bodies of women who didn't believe—but who found that it is but a short step from twilight to night—and that the rose that bloomed in the Garden of Yesterday met only yesterday's needs."

WHAT MARJORIE SAID:

"It has been man's domain to abide by the law of selection—and he worships what he can see and what pleases him most. In the reaches of that Saragossa (*sic*) Sea of Wasted Life—the tenement sections of a city—we find no girlish beauty. The hovels are filled with the starving women who didn't care or couldn't understand *what it meant to them to grow fat and lose their attractiveness* [Italics ours.—ED.]—who believed that men loved them for the sake of the woman herself and that the outward appearances mean but little. And over there, in that grim building we call the morgue, solemn and shrunken and still on the marble slabs, are the bodies of women who didn't believe—but who found that it is but a short step from twilight to night—and that the rose that bloomed in the Garden of Yesterday met only yesterday's needs."

HOW MARJORIE HAMILTON LOST HER FAT

At the time that Della Carson was selling bust-developers, wrinkle-eradicators and what not, she also had, as a side-line, a "fat-reducing treatment"—thus being able to play both ends against the middle. At that time, it seems, Marjorie Hamilton was afflicted with obesity so, it is alleged, she took the Della Carson treatment; what more natural? And here is the testimonial that Della Carson publishes as having come from Marjorie Hamilton in consideration of the marvelous results she was able to obtain:

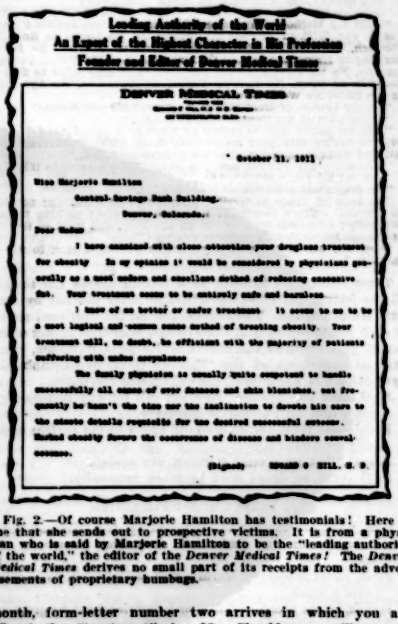
> "*My Dear Miss Carson:*—I now write to congratulate you on the wondrous merit of your beauty treatments. They are indeed remarkably quick in action. I have never before known of an external fat reducing treatment to work so rapidly. It beats all the poison pills so many fat people use. With your fat treatment it is simply necessary to sponge the fat parts of the body with your delightful preparation. It seems to fairly eat up the superfluous flesh. I shall gladly recommend your splendid treatments to my friends. You may use this letter with my picture if you wish.
>
> Sincerely yours,
> MARJORIE HAMILTON.

ANSWERING THE ADVERTISEMENTS

The full inwardness of this testimonial will be appreciated better after the Marjorie Hamilton treatment for obesity has been described. But to return to the subject: Being desirous of reducing your weight, you write to "Marjorie Hamilton, Inc.," for particulars regarding her "Quadruple Combination System." The first of the inevitable form-letters comes, in which the marvels of the "system" are dwelt on in detail. At the end of the letter is the postscript, so dear to the hearts of the mail-order faker, in which a "special offer" is made: "As you are one of the first in your vicinity" Marjorie Hamilton will reduce her regular price of $15 to $10. As a matter of fact, it seems to make no difference how many persons have written from one locality, each individual is "one of the first in your vicinity" and gets the benefit of the "special offer."

THE FORM-LETTER SERIES

Accompanying the first letter, which is in imitation typewriting, is a "reduced offer coupon," also in facsimile of typewriting, which is supposed to be sent in with the $10, if you are foolish enough to part with that amount of money. As a matter of fact, you can count on your $10 being taken whether you send the coupon or not. Should you wait a



Leading Authority of the World
An Expert of the Highest Character in His Profession
Founder and Editor of Denver Medical Times

DENVER MEDICAL TIMES

October 31, 1911

Miss Marjorie Hamilton
Central Savings Bank Building,
Denver, Colorado.

Dear Miss

I have examined with close attention your drugless treatment for obesity In my opinion it would be considered by physicians generally as a most modern and excellent method of reducing excessive fat. Your treatment seems to be entirely safe and harmless

I know of no better or safer treatment It seems to me to be a most logical and common sense method of treating obesity Your treatment will, no doubt, be efficient with the majority of patients suffering with undue corpulence

The family physician is usually quite competent to handle successfully all cases of over fatness and skin blemishes, but frequently he hasn't the time nor the inclination to devote his care to the minute details requisite for the desired successful outcome. Rushed obesity favors the occurrence of diseases and hinders convalescence.

[Signed] EDWARD P. ELIL. M. D.

Fig. 2.—Of course Marjorie Hamilton has testimonials! Here is one that she sends out to prospective victims. It is from a physician who is said by Marjorie Hamilton to be the "leading authority of the world," the editor of the *Denver Medical Times!* The *Denver Medical Times* derives no small part of its receipts from the advertisements of proprietary humbugs.

month, form-letter number two arrives in which you are offered the "treatment" for $5. Should you still remain obdurate, form-letter number three comes in which you are given the opportunity of getting the "system" for $3 cash, "and the names of one or more fat people in any locality." You are still not convinced and wait twenty days more, at which time you receive a letter offering to "send you my large complete combination $15 treatment" for $5. This rise in price is only temporary, however, and four weeks later form-letter number five comes, in which the cost of the "treatment" has been reduced again to $3. You still are unconvinced and wait another month. Form letter number six arrives and opens with the following paragraph:

"I intend to send you free and deliver to your very door, all charges prepaid, my complete $15 combination treatment for the reduction of fat. You needn't send me even a dollar for the treatment: you may have it with my compliments."

There is only one requirement: you must send in the complete "names and addresses of five fat people." Before you get through this letter, however, you find that there is a "string" tied to the offer, for the postscript reads:

"P. S.—In reading this letter I notice my stenographer made a mistake about sending no money, but of course you must send $1 only, and agree to recommend my treatment for one year after your fat is gone."

Marjorie Hamilton having, apparently, reached rock-bottom, a money order for $1 is sent for the "Famous Quadruple Combination System of Fat Reduction." In due time, the "system" arrives. It consists of forty pages of reading matter indifferently printed in imitation typewriting on poor quality paper, foolscap-size, and stapled in manuscript form. The paper is folded on itself twice and is tied with a piece of red tape.

WHAT THE ADVERTISEMENTS SAY

Before describing the essential elements of the Marjorie Hamilton so-called treatment, it is worth while summing up what, according to the advertising matter that is sent out in order to sell the treatment, it is claimed *not* to be. The following quotations will help to make this clear:

"With My Method of Treatment You May Remove Double Chin or Excess Fat Without Medicines. There Are No Drugs to Ruin the Stomach, No Horrible Dieting, No Ridiculous Fasting, No Nerve-Racking or Harmful Physical Culture Exercises, No Poison Internal Remedy, No Harmful External Preparation of Any Kind to Rub on the Skin or Body, No Turkish Baths, No Sweating, No Apparatus on the Body, No Weakening Methods."

"By my system of treatment you may eat all you desire."

"Every part of my treatment is pleasant."

"You are shown how to reduce as much as a pound a day . . . without taking into your system any drug, without starving yourself and without taking up terrible gymnasium work."

"I do not purge you nor give you any drugs whatever to take."

"You eat all you want."

"No drug store prescription to have filled."

"No harmful drugs or terrible massaging; no sweating; no painful physical culture exercises; no starvation diet; nothing to take internally; no poison stuff to rub on the body, and none of the old, ridiculous, harmful drug methods are used."

"I do not use medicine of any kind or worthless stuff to rub on the body."

These quotations indicate to a certain degree the tone of all the letters and other advertising matter put out by Marjorie Hamilton, Inc. The average reader, the uncritical reader, of such matter—and it is the average, uncritical reader whose money goes to swell the coffers of Marjorie Hamilton, Inc.—gets an impression of the "Famous Quadruple Combination System of Fat Reduction" something like this:

First, that the "system" does not call for any dieting.

Second, that no purging is necessary.

Third, that there are no drugs to apply to the surface of the body.

Fourth, that no special exercises are needed.

Fifth, that no drugs need be taken internally.

THE FAMOUS QUADRUPLE SYSTEM

Now, what are the facts? Summed up, the "Famous Quadruple System of Fat Reduction" comprises essentially the following:

First, rectal enemas of warm water and glycerin to be taken twice a week.

Second, white bread, potatoes and pastries must be given up.

Third, the "Healthtone-Obesity Bath Powder" must be applied to "the fat parts or whole body twice daily."

Fourth, the patient must take "a good long walk each day."

Fifth, she must "give up the drinking of any liquids at meal time.

Sixth, the juice of half a lemon must be taken in water four times a day.

Seventh, exercises, of which several are described, are to be taken and a certain amount of work each day done with Indian clubs and dumb-bells.

Eighth, "those desiring a more rapid reduction of weight" should purchase Kissingen or Vichy tablets and drink water in which they have been dissolved.

Such then, in brief, is the "Famous Quadruple Combination System of Fat Reduction." It is for this that $15 is asked—and, if you wait long enough, $1 accepted. That it contains nothing new is evident. That purging, whether by means of enemas or salines, will reduce weight in some cases, everyone knows. That by restricting the intake of carbohydrates—starches and sugars—the likelihood of increasing in weight is diminished, everyone also knows. That by certain exercises, adipose tissue may be removed, no one need be told.

THE REPEAT ORDERS

The joker in the whole treatment, however, lies in the "Marjorie Hamilton Healthtone-Obesity Bath Powder." A package of this comes with the "Combination System." It is a gift! It is sent with Marjorie Hamilton's compliments! Yet undoubtedly it is the one thing on which the Hamilton concern depends for "repeat" orders. In fact, the first letter that the victim gets after having purchased the "Quadruple Combination System" is one devoted to the praise of the Healthtone-Obesity Bath Powder. This powder is supposed to dissolve the fat with which the victim is afflicted. Evidently this powder is not so strong or efficacious as the one sold by Della Carson and alleged to have been used by Marjorie Hamilton in reducing her fat. While Della's powder is said to have reduced fat without the aid of purging, dieting or exercising, Marjorie's powder is but a part of a complicated "system" to effect the same result.

SPARE MOMENTS MAGAZINE

Wrinkles Vanish Over Night

$5,000 IF SHE FAILS—BUST DEVELOPS QUICKLY

No More Fat Folks—Beauty Book Free—Wonderful Beauty Secrets Revealed by Famous Beauty, Winner of $10,000 Beauty Prize—Superfluous Hair Vanishes Like Magic by New Treatment.

DELLA CARSON,
Ten Thousand Dollar Beauty Prize Winner

Fig. 3.—Greatly reduced facsimile of one of the Della Carson advertisements. The Della Carson Company was organized by W. C. Cuningham after he had disposed of the Evelyn Cuningham concern and before he had started the Marjorie Hamilton Company. In a testimonial published by the Della Carson Company, and alleged to have been written by Marjorie Hamilton, the latter claims to have reduced her weight by means of the Della Carson "system."

The following highly imaginative description of how the Healthtone-Obesity Bath Powder works appears in the letter just referred to:

"A pleased user writes and says: 'My bathroom is on the west side of my house. I have been taking my baths with Healthtone Obesity Bath Powder in accordance with your instructions. I select the afternoon as the most appropriate time for my own needs. I have noticed that the sunlight falling aslant the water, has shown a peculiarly oily surface—as though some sort of grease had been thrown on the water. It came from my pores. It was the oil resulting from the destroyed fat globules. I wondered what it amounted to in weight—and took some olive oil as an experiment. I measured it out carefully, pouring it onto the surface of the same amount of clean water. Fully two ounces were required to produce the same glazed effect on the water. I figure, therefore, that your Healthtone Obesity Bath Powder actually withdraws two ounces of fatty accumulations from my pores at each daily bath!"

Is it any wonder that the seeker after slimness desires more of this wonderful fat dissolving powder? To such as want it, Marjorie Hamilton will send a half-pound package for only $1. This mixture was submitted to a cursory examination in the Association's laboratory and here is the chemist's report:

HEALTHTONE-OBESITY BATH POWDER

A specimen of the Marjorie Hamilton Healthtone Obesity Bath Powder examined in the Association's laboratory was found to be a reddish-brown perfumed powder. It is soluble in water with which it forms a slightly turbid reddish-brown alkaline solution. The microscope showed the powder to consist of several distinct substances. Chemical tests indicated that the powder consists chiefly of sodium carbonate with smaller amounts of magnesium sulphate, potassium nitrate and possibly sodium sulphate. Or to tabulate:

Sodium carbonate (washing soda).
Magnesium sulphate (Epsom salts).
Potassium nitrate (saltpeter).
Sodium sulphate (Glauber salts).

Not that the bath powder is the only side-line carried by Marjorie Hamilton, Inc. The company also has for sale a rubber fountain syringe "at the price of $2."

A SUMMARY

To recapitulate: here we have a concern advertising, as something new to the United States, a "system" of flesh reduction that is older than the oldest inhabitant. On the specious plea that every part of the treatment is pleasant, the victim is persuaded to part with her money only to find that she must purge, diet, and carry out a system of exercises. This, too, in spite of the fact that, either inferentially or directly, she has been led to believe that none of these methods forms part of the "treatment." She is told—*before* she sends her money—that neither the internal nor external use of drugs is part of the "treatment"; she finds—*after* she has sent her money—that the use of saline purgatives internally and of a strongly alkaline powder externally, are part of the "system." She is told—also before she sends her money—that she may eat all she desires; she finds—after she sends her money—that she must give up, among other things, "white bread, potatoes and pastries." She is told—once more, before sending her money—that it is unnecessary to take up "terrible gymnasium work"; she finds—of course, after sending her money—that exercises with and without dumb-bells and Indian clubs are part of the "system."

Will the "Famous Quadruple Combination System of Fat Reduction" reduce weight? The question can be answered Yankee fashion: Mr. Sharp, a man familiar with the late Mr. Barnum's aphorism, advertised a "sure method of exterminating roaches." He would sell his secret with such apparatus as was necessary, to all who would remit $1. Those who "bit" received two small blocks of wood with the following instructions: "Place the roach on the lower block, superimpose the upper block and apply pressure."

Will Marjorie Hamilton's "Famous Quadruple Combination System of Fat Reduction" reduce weight? In reply we ask: Will Mr. Sharp's device exterminate roaches?

THE RELATIVE PURITY OF ACETPHENETIDIN AND PHENACETIN

Until six years ago the chemical product known as phenacetin was patented both as to process and to product. As the patent ran out at that time, anyone, of course, could manufacture it. It was placed in the Pharmacopeia under the name "acetphenetidin." It is on the market now under both names, "phenacetin" and "acetphenetidin." The price of the former is five times[1] that of the latter, hence it is rather important to know whether or not one is, in any way, better or purer than the other. The original patentees or manufacturers, the Farbenfabriken of Elberfeld Company, market the product under the name "phenacetin" and also under the official name "acetphenetidin," the former at about 33 cents an ounce and the latter at about 6 to 7 cents an ounce. Evidently these people believe that acetphenetidin is all right since their price-list says: "Our product is of the highest standard of purity," and in another place: "On account of the low price of acetphenetidinum, U. S. P., it is especially suitable for the manufacture of medicinal specialties, such as headache powders, etc." Remember that it is the manufacturers of phenacetin who say this.

The question arose whether or not phenacetin differs from acetphenetidin. If it does, then physicians should know it. An inquiry was addressed to Farbenfabriken of Elberfeld Company and also to Lehn & Fink, two firms which market the product in this country under both names, asking in what respect the two products differ. No answer was received from either firm. With the object of answering the question our chemists have investigated the preparations on the market, both those sold under the name "phenacetin" and those under the official title "acetphenetidin." The following is a summary of their report[2]:

THE CHEMISTS' REPORT

Physical Appearance.—All the specimens were found to be fine white crystalline powders, differing somewhat in appearance as follows: Four specimens—Acetphenetidin (Farbenfabriken), Phenacetin (Specimen 1[3]—Farbenfabriken), Phenacetin (Specimen 2[3]—Farbenfabriken) and Acetphenetidin (Squibb)—appeared very much alike, each being a very fine crystalline powder, differing only slightly as to fineness. Five other specimens—Phenacetin (Lehn & Fink), and Acetphenetidin, U. S. P. (Lehn & Fink), Acetphenetidin (Merck), and two specimens of Acetphenetidin (Powers-Weightman-Rosengarten), had the same general appearance, each consisting of a fine crystalline powder containing a considerable proportion of large rectangular plates. Three specimens—Acetphenetidin (Mallinckrodt) and two specimens of Acetphenetidin (Powers-Weightman-Rosengarten)—had the same general appearance being a moderately fine and homogeneous crystalline powder. When examined microscopically with a low-power lens the Mallinckrodt product appeared to consist principally of rectangular prisms and the Powers-Weightman-Rosengarten product to be made up largely of plates.

Identity.—All of the specimens when tested side by side responded to and complied with the identity tests of the United States, British, German, Swiss, Dutch, Swedish, Spanish, and Danish pharmacopeias. The reactions given by the several specimens were all the same, showing no difference in any case.

Melting-Points.—As a further proof of identity and similarity the melting-points of the different specimens were taken and found to be: Acetphenetidin (Farbenfabriken), 134.2 C.; Phenacetin (Specimen 1—Farbenfabriken) 133.7 C.; Phenacetin (Lehn & Fink), 134.7 C.; Acetphenetidin (Lehn & Fink) 134.9 C.; Acetphenetidin (Powers-Weightman-Rosengarten), (1) 134.3 C., (2) 133.6 C., (3) 134.7 C., (4) 134.7 C.; Acetphenetidin (Squibb) 134.2 C.; Acetphenetidin (Merck), 134.8 C., and Acetphenetidin (Mallinckrodt), 134.2 C. The melting-point is given as 135 C. in the British, French and Spanish pharmacopeias, and as 134 to 135 C. in the United States, German, Swiss, Danish, Swedish and Dutch pharmacopeias. Thus all comply with the standard given in our pharmacopeia and most foreign pharmacopeias with two exceptions and those respectively only 0.3 C. and 0.4 C. low.

Absence of Acetanilid.—The absence of acetanilid in all the specimens was indicated by the bromin test of the United States, British, German, Swiss, Dutch, Swedish and Danish pharmacopeias.

Absence of Carbonizable Matter.—The absence of carbonizable matter was shown in all specimens by the sulphuric acid test of the United States, British, German, French, Swiss, Dutch, Swedish and Spanish pharmacopeias.

1. Phenacetin is listed at 33 cents an ounce, acetphenetidin at 98 cents a pound in quarter-pound lots.

2. The full details of analysis will be published in the annual report of the Chemical Laboratory.

3. "Specimen 1" is a specimen of the product regularly sold in this country. "Specimen 2" is a specimen of a product sold in England and whose resale in this country was prohibited by the manufacturers.

Water-Soluble Matter.—All specimens when tested for excess of water-soluble matter came well within the limit (0.50 per cent.) set by the French pharmacopeia, the greatest amount being 0.20 per cent.

Ash.—When heated, all the specimens were found to yield practically no ash, the residues from 1 gm. samples weighing in no case more than 0.0004 gm.

Absence of Paraphenetidin.—When tested by the methods of the United States, British, German and French pharmacopeias, the absence of an impurity of paraphenetidin was shown in all specimens, with the exception of one specimen obtained from Powers-Weightman-Rosengarten Co., which gave a positive, though not strong, reaction and two other specimens of the same firm which reacted still more faintly. While this firm's product alone gave any reaction whatever when the U. S. P. test for paraphenetidin was applied with the test of the Swiss pharmacopeia, all but Acetphenetidin (Mallinckrodt), Acetphenetidin (Merck) and one specimen of Powers-Weightman-Rosengarten Co. gave positive, though very faint reactions, indicating that the majority of specimens, including those of the original manufacturer, contain a minute trace of this impurity.

Our findings regarding the product of Powers-Weightman-Rosengarten Co. having been communicated to this firm, their correctness was acknowledged. At the same time the firm wrote: "All that we have on hand now gives negative tests for paraphenetidin, and we believe our present records are correct when we state that all lots which we are supplying now, and have been supplying for sometime past, answer all U. S. P. requirements."

The above results arranged in tabular form to facilitate comparison of the various specimens are herewith appended:

TABLE SHOWING RESULTS OF ANALYSES OF VARIOUS SPECIMENS OF ACETPHENETIDIN AND PHENACETIN *

Name	Physical Appearance	Melting-Point (Corr.) C.	Water-Soluble Matter in Per Cent.	Ash, Per Cent.	Paraphenetidin, U. S. P. Test †	Paraphenetidin, Swiss Test †
Acetphenetidin (Farbenfabriken).	Very fine homogeneous crystalline powder.	134.2	0.17	0.02	—	+
Phenacetin (Farbenfabriken) (1).	Very fine homogeneous crystalline powder.	134.5	0.10	0.01	—	+
Phenacetin (Farbenfabriken) (2).	Very fine homogeneous crystalline powder.	133.7	0.06	0.00	—	+
Phenacetin (Lehn & Fink).	Fine crystalline powder, not uniform.	134.7	0.11	0.02	—	+
Acetphenetidin (Lehn & Fink).	Fine crystalline powder, not uniform.	134.8	0.13	0.00	—	+
Acetphenetidin (P. W. R.) (1).	Homogeneous crystalline powder.	134.3	0.19	0.03	+	+
Acetphenetidin (P. W. R.) (2).	Homogeneous crystalline powder.	134.7	0.16	0.02	+	+
Acetphenetidin (P. W. R.) (3).	Homogeneous crystalline powder.	134.7	0.14	0.02	+	+
Acetphenetidin (P. W. R.) (4).	Fine crystalline powder.	133.6	0.20	0.01	—	—
Acetphenetidin (Squibb).	Fine crystalline powder.	134.3	0.19	0.00	—	+
Acetphenetidin (Merck).	Fine crystalline powder.	134.8	0.15	0.03	—	—
Acetphenetidin (Mallinckrodt)	Fine crystalline powder.	134.2	0.11	0.01	—	—

* In all cases identity was confirmed; acetanilid was absent; carbonizable matter was absent.
† In this column plus indicates presence; minus, absence.

This examination would appear to demonstrate that the chemical substance, para-acetphenetidin, whether sold as acetphenetidin, U. S. P., or as phenacetin, is practically identical. The impurity of the product of some of the specimens coming from Powers-Weightman-Rosengarten Co. is too slight to be considered dangerous. Furthermore, a comparison of the "lot numbers" indicates that this firm has been improving its product steadily so that in the future its assurances of an unimpeachable product may be relied on. Inasmuch, therefore, as acetphenetidin complies with all the pharmacopeial requirements as to identity and purity, in just the same way as phenacetin, which sells for as high as five times the price of acetphenetidin, physicians need not hesitate in using the title of the U. S. P. "acetphenetidin" when prescribing this product.

Association News

THE ATLANTIC CITY SESSION

Announcement of Committees and Hotels for the Next Annual Session of the Association in June

Dr. W. P. Conaway, 1723 Pacific Avenue, Atlantic City, is chairman of the Local Committee on Arrangements for the next annual session of the American Medical Association, at Atlantic City, N. J., June 4 to 7, 1912.

HOTEL HEADQUARTERS

The following hotels have been selected as the various headquarters:

GENERAL HEADQUARTERS: Marlborough-Blenheim.
HOUSE OF DELEGATES: Traymore.
PRACTICE OF MEDICINE: Dennis.
SURGERY: Chalfonte.
OBSTETRICS AND GYNECOLOGY: Haddon Hall.
OPHTHALMOLOGY: Strand.
LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Seaside.
DISEASES OF CHILDREN: Traymore.
PHARMACOLOGY AND THERAPEUTICS: Dennis.
PATHOLOGY AND PHYSIOLOGY: St. Charles.
STOMATOLOGY: Young's.
NERVOUS AND MENTAL DISEASES: Brighton.
DERMATOLOGY: St. Charles.
PREVENTIVE MEDICINE AND PUBLIC HEALTH: Shelburne.
GENITO-URINARY DISEASES: Rudolf.
HOSPITALS: Rudolf.

CHAIRMEN OF SUBCOMMITTEES

The following are the names and addresses of the physicians who are chairmen of the various subcommittees of the Committee on Arrangements:

FINANCE: George Scott, 1109 Pacific Ave.
ENTERTAINMENT: J. C. McVay, 707 Pacific Ave.
SECTION ENTERTAINMENT: Bernard R. Lee, 901 Pacific Ave.
HOTELS: W. E. Darnall, 1704 Pacific Ave.
HALLS AND MEETING PLACES: David Berner, 1509 Pacific Ave.
SECTION MEETING: Samuel Barbash, 1902 Pacific Ave.
PROGRAM: Jay I. Durand, 1616 Pacific Ave.
PRINTING: I. E. Leonard, 2842 Atlantic Ave.
BADGES: Thomas G. Dunlap, 921 Pacific Ave.
SCIENTIFIC EXHIBIT: W. J. Carrington, Ryanhurst Apts.
REGISTRATION: H. T. Harvey, Morris and Atlantic Aves.
INFORMATION: M. S. Ireland, 23 S. California Ave.
ALUMNI ENTERTAINMENTS: W. C. Wescott, Delaware and Pacific.
POSTOFFICE AND TELEPHONES: E. C. Chew, 603 Pacific Ave.
COMMERCIAL EXHIBIT: Edward Guion, 34 S. N. Carolina Ave.
LADIES' ENTERTAINMENT: Mrs. W. Blair Stewart.

Correspondence

An Appeal for a Monument in Honor of John Morgan, Founder of the First Medical School in the United States

To the Editor:—John Morgan was born in Philadelphia, in 1735. He received his A.B. degree from the College at Philadelphia, now the University of Pennsylvania, in 1757. He was graduated doctor of medicine from the University of Edinburgh, and became a licentiate of the Royal College of Physicians of London, and later a fellow of the Royal Society.

During the revolutionary period, Dr. Morgan was director-general of the hospitals and physician-in-chief of the American Army. He was also a member and secretary of the American Philosophical Society of Philadelphia, and in 1787 a fellow and one of the founders of the College of Physicians of Philadelphia, and later one of its censors.

In 1765, he persuaded the trustees of the College of Philadelphia to organize the first medical school in America, and in this institution he became a professor and lectured for three years. He was thus in the fullest sense the father of medical education in the United States of America.

He died Oct. 15, 1789, and lies buried within St. Peter's Church, Philadelphia. No monument marks the place where his remains repose, and it seems desirable to the Philadelphia medical alumni of the University of Pennsylvania that the name of John Morgan should be fittingly honored by some appropriate monument.

It is believed that the medical profession in general in the United States, and all who directly or indirectly have owed anything to medical education, will heartily approve of this movement. Much has been done to commemorate the heroes of war, but to few men indeed does the country owe a heavier debt than to John Morgan, who is certainly the undisputed parent of our first medical school, and therefore of medical education throughout the country. It is hoped, therefore, that all medical institutions here and elsewhere may be in sympathy with this commemorative movement and unite with us in suitably marking the last resting-place of John Morgan, and erecting a monument in memory of his great services to the medical profession.

Subcommittees (a list of which will be published later) have been formed in various parts of the country for the purpose of soliciting financial aid from those interested in the undertaking.

EDGAR FAHS SMITH, M.D., S. WEIR MITCHELL, M.D., WILLIAM OSLER, M.D., WILLIAM PEPPER, JR., M.D., CLARENCE PAYNE FRANKLIN, M.D.

SWITHIN CHANDLER, M.D., Chairman, Philadelphia.

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Bronchoscopy

To the Editor:—The interesting report (THE JOURNAL, Feb. 17, 1912, p. 467) of a few cases of "Tacks and Nails in the Air Passages; Bronchoscopy," by Dr. E. Fletcher Ingals, emphasizes and vividly portrays "the heart-breaking delays, the extreme anxiety for the patient and the knowledge that prolonged operations of this kind are dangerous, while failure may spell death for the patient, place the operator under such circumstances under an indescribable stress." The subsequent dangers of edema of the upper air-passages or even of edema of the lung and of a fatal bronchitis or bronchopneumonia are referred to.

I know of one case in a New York hospital in which death resulted in a child of about 1 year, as the bronchoscope was introduced. The difficulties of bronchoscopy, even in such expert hands as Ingals', are well shown in the cases cited, though the site of the foreign body was located by a radiograph.

The time occupied in clearing the field of blood, mucus, pus, etc., is considerable. The danger of the foreign body slipping from the grasp of the forceps is evident, necessitating renewed search and further manipulation. The prolonged anesthesia is not without its incidental disadvantages.

In Case 1, after prolonged effort to control bleeding and to clear the field, occupying one hour, the tack was brought to view and grasped. Too large to be drawn into the bronchoscope, it was withdrawn with the instrument but escaped at the glottis. Further search, continued for a half hour, failed to find the tack. When the instrument was withdrawn, the tack was discovered in the mouth. In another case he had a similar experience. Case 2 necessitated a second operation, fifteen days later, preceded by a tracheotomy, in order to remove the tack which had slipped out of the grasp of the forceps at the first attempt and taken a new position. In the third case, one of eight years' standing, unusual difficulty was experienced from an obstruction 3 cm. below the glottis, necessitating a low bronchoscopy.

It may be presumption on the part of a general practitioner to dare to criticize the work of an expert. Contrast, on the other hand, the picture of the removal of a foreign body by means of the fluoroscopic screen as described by myself and Dr. R. T. Morris in *Surgery, Gynecology and Obstetrics*, May, 1910, pp. 524-529.

The patient is placed on a wooden table (the *x*-ray tube beneath) and after a low tracheotomy has been performed, a pair of forceps is passed down to the site of the foreign body. The shadow picture on the fluoroscopic screen placed against the anterior chest enables the operator to direct the forceps to the desired spot with a minimum of trauma to the delicate mucous membrane. The presence of bronchial secretion of mucus, mixed pus, pus or blood in no way interferes with the manipulation. In my own case, the exposure to the *x*-rays as timed by Dr. Hirsch did not exceed two minutes. The entire operation in Dr. Morris' case occupied thirty minutes.

I adopted this method at the suggestion of Dr. I. S. Hirsch. Subsequently, we found that Dr. Samuel Lile had suggested the method in a short article in the *Virginia Semi-Monthly*, Feb. 8, 1901.

Dr. Maurice D'Halluin, Lille, France, a few years ago, proposed as new the same procedure. Dr. Morris' case and my own, it is true, were recent cases. It may be argued that in cases of long standing, this method may not be as easy; that possibly there may be serious hemorrhage from the granulations, etc.

I notice that in Dr. Ingals' Case 2, he was compelled to push the forceps blindly through the granulations in order to seize the tack. Four times the forceps slipped and the last time, as the tack nearly reached the glottis, it again slipped and a second operation was necessary fifteen days later.

If such an accident occurs when a fluoroscopic screen is used, the body can be easily located by the shadow on the screen and removed promptly. The hemorrhage from granulation tissue, though profuse, is not dangerous as a rule. The fact that a preliminary tracheotomy is required is not a valid objection, for in two of Ingals' cases similar measures were necessary.

FRANCIS HUBER, M.D., New York.

[The above was referred to Dr. Ingals, who says:]

To the Editor:—This method has been employed occasionally since the early days of bronchoscopy, and at times must be a great help. This article, however, would lead the average man to suppose that if he was to use the fluoroscope, there would be very little difficulty. Such an impression would be very unfortunate. Some cases of bronchoscopy are very easy, and others, like the selected ones that I referred to, are difficult. The more one does of this work, the greater is his appreciation of the difficulties.

E. FLETCHER INGALS, Chicago.

Epidemic of Small-Pox in Alaska

To the Editor:—Last summer, at the opening of the Yukon river navigation, an outbreak of small-pox occurred at Dawson, the infection probably brought by some early traveler from the "outside." Much inconvenience to the steamboat companies and the traveling public was caused by the quarantine which it was necessary to set up against Dawson. But prompt measures taken by the Canadian health officer, Dr. Thompson, and the American army surgeon, Dr. Suggs at Fort Egbert (Eagle), just across the boundary line, were effectual in preventing the spread of the disease down the 2,200 miles of open river, and up the many tributaries.

To this statement there is one exception: the joint American and Canadian survey parties engaged in delimiting the boundary between the United States and Canada, along the 141st meridian, got out of Dawson before the disease had declared itself, and proceeded to their point of operations on the Porcupine River some 600 miles from Dawson. Someone in the train of this expedition must have carried the infection, for shortly after its arrival at the Rampart House, small-pox broke out among the natives.

Dr. Gilbert Smith, surgeon of the American survey party, was fortunately on the spot, and at once took action against the spread of the disease. Sending an express to Dawson, the Canadian authorities immediately invested him with full

power as provisional territorial health officer, and with most commendable promptness succeeded in getting to him an experienced nurse, a detail of the Northwest Mounted Police, and full medical and other supplies, within nine days after word had been received. A little later they despatched material and workmen for the building of a hospital with a capacity of ninety beds.

At present, Jan. 15, 1912, the epidemic still rages at the Rampart House, but by the most energetic measures and observation of the strictest quarantine, it has been confined to that locality. The natives to the number of 120 have been segregated on an island of the Porcupine River, and are fed and cared for by the Canadian government. So far, there have been ninety-eight cases, of whom forty have recovered and been discharged at this date. Discharged families are furnished with entire new outfits, all their old stuff being burned, and they are allowed to depart only after a period of detention and thorough inspection.

One of the officers of the Episcopal mission in Alaska, Archdeacon Stuck, happened to be at Fort Egbert when the outbreak occurred at Dawson, and was able to secure by telegraph an immediate despatch of sufficient vaccine points to vaccinate all the natives on the Yukon and its tributaries. The medical missionaries at their several stations and the trained nurses at missions where there are no physicians have vaccinated in the past summer close to 3,000 Indians. At this place, I myself vaccinated upward of 400. So we feel that our Indian charges have been afforded such protection as medical science can command. But the whole interior of Alaska owes a deep debt of gratitude to Dr. Gilbert Smith for his strenuous and successful efforts to confine the disease on the upper Porcupine River, and to the Canadian government for so promptly and efficiently backing him. During the season of navigation, the United States government maintained a quarantine under my charge near the mouth of the Porcupine River, four miles from here. And now that the winter trails are established, it seems necessary to resume this preventive measure.

Reports from the Rampart House indicate that the disease is of an especially virulent type. To quote Dr. Gilbert Smith: "The epidemic has been of a most virulent type, the skin lesions especially profound, accompanied with extensive destruction of tissue, in consequence of which pitting will be marked in various cases. Mr. Lee, the nurse at the hospital, who has had considerable experience in the work, asserts that he has never seen cases that can compare, even in the Orient." Under the circumstances, it is a very remarkable tribute to the efficacy of the measures that have been taken for the treatment of the disease that so far there has been only one death. It should be mentioned that on the first outbreak on the Porcupine every native was immediately vaccinated.

We have good hope that by spring the disease will have worn itself out by the exhaustion of material, and that the interior of Alaska will be spared this dreadful scourge, the thanks for its disappearance being due in chief measure to Dr. Gilbert Smith.

GRAFTON BURKE, M.D.,
Medical Missionary, Fort Yukon, Alaska.

Chinosol

To the Editor:—It is unfortunate and an injustice to our valuable antiseptic "chinosol," that many physicians (thinking that chinosol has been condemned by the Council on Pharmacy and Chemistry of the A. M. A.) will not read the literature which is sent to them and will not listen to the things our representatives say when they call. The facts are that chinosol has been accepted by the Council for "New and Nonofficial Remedies" and the investigation of that body goes to show that chinosol is a powerful antiseptic, slightly more so than is bichlorid of mercury; it is also non-poisonous. We think it only fair that you should publish this statement.

CHINOSOL COMPANY, New York.
CHARLES ROOME PARMELE, President.

Thermometer Swallowed Without Harm

To the Editor:—Carelessness of physicians in general practice in making reports of unusual occurrences is to blame for the loss of much valuable information. But each one thinks his case is probably only one among many others and fails to report it. So of the fever thermometer swallowing act, reported in the January and February numbers of THE JOURNAL; possibly there are many such cases. In August, 1891, a nurse carelessly placed a thermometer in the mouth of one of my patients delirious from typhoid fever. Patient immediately *chewed it up* and swallowed it. No serious results followed. Patient is living to-day and has not paid his bill, not even for the thermometer. At the time, I mentioned the case to Dr. A. J. Banker of this city and he informed me that one of his patients had swallowed a thermometer and that when passed per rectum it registered 104, his case occurring only a short time before mine. Neither of us considered our cases worthy of report at the time.

GEORGE T. MCCOY, M.D., Columbus, Ind.

A Finger-Guard

To the Editor:—After reading the article on a finger-guard in THE JOURNAL, March 2, p. 628, I submit my device. A No. 10 or a No. 11 veterinary capsule, hardened in a formaldehyd solution, with holes cut as desired to allow ventilation of the finger, makes a very strong, light and transparent finger-guard, capable of being fastened in place by adhesive plaster.

CHARLES W. SIMISON, M.D., Hawley, Minn.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ETHICS OF ACCEPTING A POSITION ON A CHURCH DISPENSARY

To the Editor:—In a large city there is no free dispensary of any kind at which poor people may receive medical attention. In one section of the city, where there are many poor people, a church has taken up the matter and established a free dispensary and asked three reputable physicians to give their services for a short period, one each day. Is there anything unethical or wrong in these physicians giving their services to such an institution?

H. R. V.

ANSWER.—No, provided the services are limited to persons worthy of the receipt of charity. Our correspondent does not intimate in what material respect, if any, this dispensary differs from one organized under any other auspices. Perhaps, at first sight, it seems a little out of the usual field of a church to take up a work of this kind, and yet the fact that in such a large city there is no free dispensary proves that the local organizations in whose provinces this work would seem to fall more naturally are guilty of a neglect of duty. Moreover, those who wish the church to be guided by earlier and more "spiritual" ideals usually forget that it was in the foundation and operation of just such practical works as hospitals and asylums that the early church expressed its spiritual fervor and proved its right to existence.

The live church of this generation is the servant of the community. As an exponent of the higher life it does not content itself with holding, on Sunday and perhaps once in the middle of the week, services limited exclusively to the spiritual side of man's nature. The live church realizes that it cannot minister effectively in the spiritual way without some regard to the physical and mental condition of the people. The spirit which the church presumably embodies is responsible for the establishment of hospitals, orphanages and various other organizations for the relief of physical distress, but the work usually is carried on by independent bodies, the function of the church being to keep the flame of brotherly love alight in the hearts of men. Thus it may take up almost any problem of humanity that is disregarded in the community and either directly or indirectly work for its solution.

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There is room for vastly more helpful cooperation between the medical profession and the church. The present campaign for the education of the public on hygiene and sanitation is one avenue in which both could cooperate with remarkable effectiveness. The church needs the medical profession just as much as the medical profession needs the church, and before the church is blamed very seriously for some unwise attempts in the direction of the Emmanuel movement, the medical profession could afford to take a little blame for not having done more in the endeavor to prevent a condition becoming so acute that the church felt—in spite of the lack of technical training by many of its leaders—that it must attack the problem. In many a community conditions are such that, if a church wished to have some lectures on public health and prophylaxis, it could not secure the services of the best men because of professional jealousies. The medical profession is in danger of being left in the rear, if it does not set its course to take advantage of the prevailing currents of cooperation which are carrying so many organizations on toward the haven of success. It is a common thing for several churches in the community, formerly antagonistic or at least studiously independent, now to cooperate in attacking various community problems. Merchants cooperate in securing agreements to close their places of business certain afternoons or evenings. Many other instances show that the value of cooperation and presenting a united front are realized. If the medical profession is to stand for a high ideal of better health and hygiene for the people, jealousies and friction must be laid aside, or at least hidden from manifestation.

All of which is respectfully submitted to the medical profession. Most of it may have little to do with our correspondent's question, but it needs to be said and this seemed a good opportunity.

A SUBSTITUTE FOR MERCURIC CHLORID IN THE DISINFECTION OF HANDS

To the Editor:—As bichlorid makes my hands very rough, I would like to know what is the best thing to use to disinfect my hands for operating-room and for office treatment. O. W.

ANSWER.—If bichlorid irritates the skin as it does with some individuals, its use should be discontinued. In the preparation of the hands thorough scrubbing with a good soap and hot water is by far the most important part of the procedure. If this be properly done and the hands then washed in 60 to 70 per cent. alcohol further attempts at chemical sterilization may safely be dispensed with.

Much fetichism is frequently seen displayed in the use of alcohol. To hold out the palms of the hands to have a few drops of alcohol poured into them, as is so frequently done, is as absolutely useless as would be an incantation. The hands must be washed in the alcohol and a soft brush used. The hands then should be thoroughly dried, dusted with sterile powder and dry, sterile rubber gloves put on. The most delicate hands will almost certainly stand this treatment and if the method is properly carried out it is perfectly safe and reliable.

ACUTE EPIDIDYMITIS

To the Editor:—What is the most probable etiologic diagnosis in the following case? The patient has an exquisitely acute epididymitis, the enlargement of the whole testicle being that of about a fist in size. There is extreme tenderness in the deep perineum; the freshly voided urine contains many shreds, variously shaped, some sinking to the bottom of the vessel. There is no history of any direct injury, nor of any acute infectious disease like mumps, etc.; the patient on several occasions denied ever having had gonorrhea, but is finally brought to acknowledge having had an attack four years ago. The patient asserts that the epididymitis is due to lifting a pail of coal. J. H. B.

ANSWER.—Acute epididymitis is nearly always due to one or two factors, viz., gonorrhea and tuberculosis. Tuberculous epididymitis is of slow development. It occurs most frequently in the head of the epididymis and runs a rather prolonged course. Accompanying it there is usually a tuberculosis of the vas deferens, the seminal vesicles and the prostate. It may even involve the trigone of the bladder. Tuberculosis of the vesicle and prostate gives practically no symptoms, but an involvement of the bladder gives the symptom of frequent urination. On palpation through the rectum the prostate and vesicles, when they are involved in a tuberculous process, usually have a nodular feel and are not particularly tender. These nodules are small and scattered over the surface of the gland.

Gonorrheal epididymitis is almost always secondary to a gonorrheal seminal vesiculitis. If in every case of gonorrheal epididymitis a rectal examination is made, an enlargement of the seminal vesicle will practically always be found. This seminal vesicle, in contradistinction to the tuberculous vesicle, is prone to be quite painful, particularly at the commencement of the disease. The prostate may or may not be involved; it may or may not be tender to pressure. The urine will contain shreds of various kinds, and may be cloudy and contain pus. In acute disease of the testicle, due to metastatic abscess or to mumps, the process is limited to the testicle itself. The epididymis is free; there is no pain in the perineum; there are no shreds in the urine. Hence, in this particular case the probable etiologic diagnosis would be that of acute gonorrheal epididymitis, complicated with an acute gonorrhea and seminal vesiculitis.

Trauma, from the lifting in this case, is very common before the onset of an epididymitis due to gonorrhea. For instance, a man with acute gonorrhea is playing cards. He rises and strikes his testicle gently against the edge of the table. The result is a typical gonorrheal epididymitis. Another man with acute gonorrhea plays golf all day and becomes very tired. During the night he is awakened with pain in his testicle and has a typical acute gonorrheal epididymitis. So the lifting was a contributing cause only.

TINCTURE OF CHLORID OF IRON

To the Editor:—Is there any way to prescribe tincture of chlorid of iron in such a diluent or vehicle that no harm could be done to the teeth and that therefore the usual caution to take through a tube and to rinse out the mouth need not be given? When a patient is told to do this it at once excites alarm and often the medicine will not be used. The Weld Syrup Tr. Ferri Chlor. is said to be a preparation which will not harm the teeth. Can any non-proprietary preparation be compounded, including the usual dose of tincture of chlorid of iron, which will not be corrosive as to the teeth, so that it may be taken without the ordinary directed precaution of using through a tube? X. Y. Z., Oneida, N. Y.

ANSWER.—So far as known there is no way in which tincture of chlorid of iron can be prescribed so that it will not be more or less injurious to the teeth—if it remains chlorid of iron. It may be assumed that if it does not injure the teeth when given in ordinary dilution, some chemical change has occurred and the substance given is no longer chlorid of iron. If, therefore, one desires to use the chlorid of iron for its local effects on the throat, the stomach or the intestines, it is necessary to give it through a tube or largely diluted, in order to prevent injury to the teeth. If one does not desire the stimulating action of chlorid of iron but wishes to give a ferric salt, there are a number of official preparations which can be used for this purpose, such as the scale preparations, iron and ammonium citrate, soluble ferric phosphate or pyrophosphate. The National Formulary contains a preparation called tincture of citrochlorid of iron. This is prepared by gently heating ferric chlorid and sodium citrate together and when cool adding alcohol and water. In this case a chemical change occurs, so that while the preparation contains about the same amount of iron as the official tincture of ferric chlorid, it is no longer a chlorid of iron.

We are not informed as to the composition of the Weld syrup but we think it fair to assume that if it will not injure the teeth, it is because some modification of its chemical composition has been made. Simply to secure the constitutional effects of iron, the use of Blaud's pill of ferrous carbonate seems to be the most satisfactory method. The use of palatable preparations is to be encouraged but physicians should always understand that a modification of the disagreeable properties of such a preparation may involve a change of character which will nullify the therapeutic value. This is conspicuously true as to the colorless tinctures of iodin which do not contain elementary iodin and are incapable of securing the local effects for which iodin is used. Fortunately, the local effects of ferric chlorid are of less moment but the therapeutist should realize that in applying tasteless or non-irritating preparations, he may be sacrificing the distinctive properties which make, at least in certain cases, the irritating preparations superior to the non-irritating.

FOSSIL MEDICAL WORDS

To the Editor:—Referring to your editorial on "Fossil Medical Words" (THE JOURNAL, Feb. 3, 1912, p. 344), I submit some notes I have taken on etymology. "Antimony" means bad for monks. Valentine once gave this mineral to pigs, which throve on it; he gave it to monks, who died from it. "Belladonna" literally means fine lady. "Atropin" is named for one of the three Fates—Atropos, who cuts the thread of life. "Cadaver" is from the Latin *caro data vermibus*, flesh given to the worms. "Catheter," from the Greek, means a thing sent down. "Cinchona" is named for the wife of the Count of Chinchon, viceroy of Peru. "Crisis" derives its general meaning from its use in medicine. Hippocrates believed that the humors of the body ebbed and flowed like the tide of the sea. Tidal days were called critical days and the tide itself crisis—

a time when the physician could judge the nature of disease. "Delirium" is from the Latin *de*, "from," and *lira*, "furrow," because the mind departs from its proper course in delirium. "Garble" means to sift out, to cull, to assort. A statute in the reign of James I imposed a penalty for the sale of drugs not garbled. "Imbecile" literally means leaning on a stick. "Jalap" is the name of a town in Mexico. "Morphin" comes from Morpheus, the god of sleep. "Piles" is from *pila*, a ball. A condition is "precarious" when it depends on prayers. It is a symbol of Jupiter, under whose special protection all medicines were placed. The rectum was believed by the old anatomists to be straight—*rectus*. "Syphilis," etymologically from the Greek, means hog-loving. Testicle is from *testis*, a "witness" of manhood.

R. M. HARBIN, Rome, Ga.

ANSWER.—We are indebted to our correspondent for calling attention to these interesting words. Etymology, however, is far from being an exact science, and several of the derivations offered are not generally accepted. The suggested derivation of "antimony," while probably erroneous, is picturesque and in its way instructive. The word is the modern representative of the late Latin *antimonium*, which in turn is supposed to be derived from a root akin to the Latin *stibium* and the Greek *στίμμι*. "Cadaver," according to the best authorities, is derived from the Latin *cadere*, to fall. The Greek word for a corpse, *πτῶμα*, is in the same way derived from the Greek *πίπτω*, I fall. The derivation of "crisis" offered by our correspondent suggests the sea-coast superstition about a connection between death and the ebb of the tide. We are not aware, however, of any evidence connecting this or any similar belief with the word "crisis." The Greek *κρίσις*, defined as a separation, a judgment, event, and derived from the verb, *κρίνω*, I judge, was used commonly to mean a decisive state of things long before Hippocrates adopted it for the decisive point of a fever. The derivation of imbecile from *in* and *bacillus*, a stick, meaning leaning on a stick from weakness, is considered rather improbable. The derivation seems to be doubtful. It is curious that we should have lost the exact etymologic meaning for the word "syphilis," though it was originally derived from the name of a Latin poem by Fracastorius written in 1530 and called after one of the characters in the poem. Whether the derivation is from *symphilus* which means loving or from *syophilus*, which means a lover of hogs, is doubtful. Probably the first derivation is the right one.

TREATMENT OF ENLARGED TUBERCULOUS GLANDS

To the Editor:—Please give me the best method of converting enlarged tuberculous cervical glands into abscesses of watery consistency so that the contents can be removed by an aspirating needle. The patient has been under tuberculin treatment for the past six months and apparently the disease is arrested, yet there are three large glands which have not diminished in size. They are freely movable and easy of approach. The patient refuses operation for cosmetic reasons. Is there any digestant which will bring about the desired result without severe inflammatory reaction or great danger?

B. R. D., Jamaica Plain, Mass.

ANSWER.—The tuberculin treatment is the proper one, but it must be continued for some time. We should judge from the description of your case that the glands could be removed with practically no scar, but whether or not they require removal is for the surgeon to decide. It is not necessary to remove the glands until they break down; but any attempt to force them to break down should be avoided, and, if they are to be removed at all, it should be done before they break down. We know of no digestant that can be used as you suggest.

SOMNOFORM

To the Editor:—Please inform me about Somnoform and its effects when used as an anesthetic in extracting teeth.

Last November, when my wife had some teeth extracted, our dentist spoke very highly of this preparation as without bad effects. It left her, however, with a very irritable asthmatic respiratory tract and the circulatory system has been upset, causing a congestion in all the organs, with the symptoms which accompany such conditions. It seems as if the pressure brought to bear on the heart during her severe attacks of coughing and difficult breathing caused the heart to dilate, which made the tricuspid insufficient.

She has been in bed the greater part of the time since December 18, when her heart seemed to give way under the strain. She is able to be up and around now, but that is all; on slight exertion she loses her breath. She was a strong, healthy woman of a nervous temperament, somewhat stout but solid. Sugar was found in the urine, which quickly cleared up on diabetic diet and has not returned, though carbohydrates are allowed in moderation. The glycosuria was supposed to be due to the shock. I would like to know if any similar experiences have been reported.

B. R.

ANSWER.—Somnoform is said to be a mixture of ethyl chlorid 60 parts, methyl chlorid 35 parts and ethyl bromid 5 parts. The relative value of ethyl chlorid and methyl chlorid as compared with ether and chloroform is still an open question, as also is the relative safety of administration. In a general way they have been found to stand, both in effect and safety, between nitrous oxid and ether.

W. J. McCardie (*Brit. Med. Jour.*, March 17, 1906, p. 616) cites a number of fatalities from the use of ethyl chlorid and also states that several deaths have occurred from Somnoform. In a former note in this department (THE JOURNAL, Nov. 21, 1908, p. 1788) it is stated that eighteen deaths had been reported from ethyl chlorid; but the number of administrations is not accurately known, so that the mortality rate cannot be stated positively. So far as we know, symptoms similar to those given by our correspondent have not previously been noted as resulting from the use of ethyl chlorid, or from the other alleged ingredients of Somnoform.

TECHNIC OF THE ETHER VAPOR ANESTHESIA

To the Editor:—In an article in THE JOURNAL, Feb. 17, 1912, p 465, by Dr. Gwathmey, the ether vapor method of giving an anesthetic is mentioned. Please refer me to information on the apparatus and technic of this method.

G. E. KNAPPENBERGER, Macomb, Ill.

ANSWER.—This method involves the warming of the ether vapor and is described or referred to in the following articles:

Anesthetics, THE JOURNAL, Nov. 11, 1911, p. 1617.
Seelig, M.: Fallacy of Warmed Ether Vapor, *Interstate Med. Jour.*, September, 1911; abstr. in THE JOURNAL, Sept. 30, 1911, p. 1162.
Pynchon, E.: Apparatus for Ether Anesthesia, THE JOURNAL, May 21, 1910, p. 1690.
McRoberts, W. J.: An Advance in Anesthetic Technic, *Northwest. Lancet*, Aug. 15, 1909; abstr. in THE JOURNAL, Sept. 18, 1909, p. 970.
Report of the Anesthesia Commission of the American Medical Association, THE JOURNAL, Nov. 7, 1908, p. 1572.
Gwathmey, J. T.: Warm Versus Cold Anesthetics, *New York Med. Jour.*, February, 1908; abstr. in THE JOURNAL, April 4, 1908, p. 1150.

MYCETOMA OR MADURA FOOT

To the Editor:—I am preparing a report of a case of mycetoma, or Madura foot, occurring in my practice here, and desire to know the frequency of its occurrence in the United States. Any information on this point from yourself or your readers will be appreciated.

HENDERY ALLISON, M.D., Kingsville, Tex.

ANSWER.—According to Hyde ("Diseases of the Skin") and also to Pusey ("Principles and Practice of Dermatology") only five cases of mycetoma have been reported as originating in the United States.

CRESOLENE

To the Editor:—Please give the composition of Cresolene, made by the Vapo-Cresolene Co., and name a good substitute for it in whooping-cough.

B. P. C.

ANSWER.—Cresolene or Vapo-Cresolene is, according to an examination made in the Association's chemical laboratory (THE JOURNAL, April 4, 1908, p. 1135), "essentially cresol and corresponds in every respect to cresol, U. S. P." Purchase the cresol official in the Pharmacopeia.

The Public Service

Medical Department, U. S. Army

Changes during the week ended March 9, 1912.

Sherwood, Charles E., acting dental surgeon, February 26, left presidio of Monterey, Cal., en route to presidio of San Francisco for temporary duty.

Watkins, Victor E., M.R.C., February 27, reports at date with 22d Infantry, camp at Fort Bliss, Tex. Left Fort Sam Houston same date.

Wolven, F. H., dental surgeon, February 27, ordered to Fort Stevens, Ore., for temporary duty.

By par. 7, S. O. 52, March 2, 1912, War Department, the following named officers of the Medical Corps will report in person on Monday, April 15, 1912, to Lieut. Col. James D. Glennan, Medical Corps, president of the examining board, Letterman General Hospital, presidio of San Francisco, appointed in par. 24, Special Orders No. 25, Jan. 30, 1912, War Department, for examination to determine their fitness for promotion. On the completion of his examination each officer will return to his proper station or to the place of receipt by him of this order: First Lieuts. Arnold D. Tuttle, Clarence A. Treuholtz, George H. McLellan, Alexander D. Parce, Robert W. Kerr, Lee R. Dunbar, Rozier C. Bayly.

By par. 4, Special Orders No. 52, March 2, 1912, War Department, the following named officers of the Medical Corps will report in person, on Monday, April 15, 1912, to Col. Henry P. Birmingham, Medical Corps, president of the examining board, Army Medical Museum Building, Washington, D. C., appointed in paragraph 13, Special Orders No. 243, Oct. 19, 1909, War Department, for examination to determine their fitness for promotion. On the completion of his examination each officer will return to his proper station or to the place of receipt by him of this order: First Lieuts. Frederick S. Wright, Daniel W. Harmon, Eben C. Hill, James A. Wilson, Armin Mueller, William S. Shields, Addison D. Davis, William H. Smith, Clarence E. Fronk, William R. Dear.

Truby, Albert E., major, March 4, designated as attending surgeon, headquarters eastern division, Governor's Island, N. Y.

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Duncan, William A., captain, March 2, ordered to proceed to Fort Oglethorpe, Ga., for the purpose of installing in the hospital at that post a new type of *x*-ray machine.

Mills, R. W., lieut., March 4, ordered to Walter Reed General Hospital, Takoma Park, D. C., for observation and treatment.

Feely, James F., acting dental surgeon, March 4, reports for temporary duty at Fort Dupont, Del.

Hart, William L., captain, February 27, reports with 3d Field Art. Camp at Fort Bliss, Tex.

Mason, George L., dental surgeon, March 2, reports for temporary duty at Fort Riley, Kan.

Phelan, James M., and Boyer, Perry L., captains, March 6, ordered to proceed to Washington, D. C., for examination for promotion, May 1.

Rich, Edwin W., captain, March 6, ordered to proceed to Letterman General Hospital, San Francisco, for examination for promotion, May 1, 1912.

Dear, William R., lieut., March 6, orders directing him to proceed to Fort Robinson, Neb., revoked, and instead to proceed to Fort Slocum, N. Y., for duty.

Medical Corps, U. S. Navy

Changes for the week ended March 9, 1912.

Baker, M. W., surgeon, from the *Independence* to the *Denver*.

Angeny, G. L., surgeon, from the *Lancaster* to the *Indiana*.

Brown, E. W., P. A. surgeon, commissioned passed assistant surgeon from Nov. 29, 1910.

Davis, R. G., asst. surgeon, ordered to the naval hospital, Las Animas, Colo.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Seventh Month—Fourth Weekly Meeting

ABORTION

DEFINITIONS: Abortion, miscarriage, premature labor, threatened, inevitable, partial, complete, missed, provoked, therapeutic, criminal.

CAUSES: 1. Spontaneous, unintentional abortion: (a) From stimulation of uterine contractions; drugs, massage, electricity, douches, infectious diseases, syphilis, endometritis, decidual diseases, uterine displacements and distention. (b) from separation of egg; traumatisms, falls, strains, etc. (c) Death of fetus; obstruction of circulation in cord, disturbed placental function, placental detachments or infarcts, syphilis, acute infection of placenta. (d) Disease of fetus; development, acute or chronic (syphilis) infections.

II. Provoked abortion. Therapeutic or criminal. Oxytocic drugs, massage, electricity, vaginal and intra-uterine injections, sounds and tents, rupture of membranes, curettage.

SYMPTOMS: Pain, hemorrhage.

DANGERS: Infection. Hemorrhage.

TREATMENT: 1. Threatened (a) no infection, (b) with infection. 2. Inevitable (a) no infection, (b) with infection.

EXTRA-UTERINE PREGNANCY

DEFINITIONS: Extra-uterine; tubal, interstitial, isthmial, ampullar; ovarian, abdominal (secondary), cornual.[1]

SYMPTOMS: Before rupture: General: history of pelvic inflammation, sterility, general symptoms of pregnancy. Special: amenorrhea, metrorrhagia, polyuria, colicky menstrual pains, enlarged uterus, soft cervix, patulous os. At time of rupture: Intraperitoneal: pain, collapse, pulse and temperature, respiration, sweats, nausea and vomiting, syncope, hyperesthesia of abdomen, muscular rigidity. Extraperitoneal: Same as intraperitoneal but modified. Displaced uterus, uterine hemorrhage, circumscribed tumor.

TREATMENT: Before rupture, after rupture.

Monthly Meeting

Early Diagnosis of Pregnancy.

The Examination of the Urine During Pregnancy.

Treatment of Abortion.

1. Webster: Am. Jour. of Obstetrics, July, 1904.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 1-2. Sec., Dr. Ancil Martin.

CALIFORNIA: San Francisco, April 2. Sec., Dr. Charles L. Tisdale, 929 Butler Building.

COLORADO: State Capitol, Denver, April 2. Sec., Dr. David A. Strickler, 612 Empire Building.

IDAHO: Boise, April 2-3. Sec., Dr. O. J. Allen, Bellevue.

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

MINNESOTA: State University, Minneapolis, April 2. Sec., Dr. W. S. Fullerton, 248 Lowry Building, St. Paul.

MONTANA: The Capitol, Helena, April 3. Sec., Dr. W. C. Riddell.

NEW MEXICO: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.

OKLAHOMA: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.

RHODE ISLAND: Room 315, State House, Providence, April 4-5. Sec., Dr. Gardner T. Swarts, State House.

UTAH: County Building, Salt Lake City, April 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

WEST VIRGINIA: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Colorado July and October Reports

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written and oral examinations held at Denver, July 5, and October 3, 1911. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75.

At the examination held July 5, the total number of candidates examined was 19, all of whom passed. Twenty-seven candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Colorado (1911) 75.2, 78, 79.8, 80.4, 82.1, 82.7, 83, 84.2, 85, 85.4, 85.5, 86, 86.2, 88.1.			
Chicago College of Medicine and Surgery		(1910)	79.4
Denver and Gross College of Medicine		(1910)	82.3
St. Louis University		(1910)	78.2
Kansas City Hahnemann Medical College		(1910)	75.5
Medico-Chirurgical College of Philadelphia		(1911)	87.4

REGISTERED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
Georgetown University	(1894)	Illinois
Central Coll. of P. and S., Indianapolis	(1889)	Indiana
Northwestern University Medical School	(1910)	Illinois
College of Physicians and Surgeons, Chicago	(1894)	Iowa
Rush Medical College (1893) Nebraska; (1897) Iowa; (1904) Illinois.		
State University of Iowa	(1909)	Iowa
University of Kansas	(1907)	Kansas
University of Louisville (1893) Kentucky;	(1910)	Wyoming
Tulane University of Louisiana...(1905) Texas;	(1909)	Mississippi
Harvard Medical School	(1895)	Mass.
University of Minnesota, College of Med. and Surg., (1902) Iowa.	(1897)	Minnesota;
Ensworth Medical College	(1906)	Missouri
Beaumont Hospital Medical College, St. Louis	(1897)	Illinois
Marion-Sims College of Medicine, St. Louis	(1897)	Illinois
Columbia University, Coll. of P. and S.	(1901)	Missouri
Washington University, St. Louis	(1906)	Missouri
Barnes Medical College	(1903)	Illinois
Toledo Medical College	(1907)	Ohio
Pulte Medical College	(1894)	Ohio
Jefferson Medical College	(1905)	Vermont; (1909) W. Virginia
Woman's Medical College of Pennsylvania	(1909)	New Jersey

At the examination held October 3, the total number of candidates examined was 9, of whom 7 passed, including 2 osteopaths, and 2 failed. Twenty-eight candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Colorado		(1911)	81.9, 83
Northwestern University Medical School		(1911)	90.8
Kansas City Hahnemann Medical College		(1911)	77.1
Tennessee Medical College		(1908)	75.4
	FAILED		
Denver Homeopathic College		(1908)	74.4
Bennett Medical College		(1909)	64.8

REGISTERED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
Medical College of Alabama	(1892)	Alabama
University of Colorado	(1905)	New Mexico
George Washington University	(1888)	Dist. Colum.
College of Physicians and Surgeons, Chicago	(1904)	Illinois
Hahnemann Med. College and Hospital, Chicago	(1903)	Illinois
Northwestern University Medical School	(1910)	Illinois
Medical College of Indiana	(1881)	Illinois

Medical College of Evansville	(1882)	Illinois
Keokuk Med. Coll., Coll. of P. and S.	(1907)	Iowa
Louisville Medical College	(1881)	Kansas
Kansas Medical College	(1907)	Kansas
Baltimore University	(1894)	New York
Harvard Medical School	(1905)	Mass.
Barnes Medical College	(1901)	Illinois
University Medical College, Kansas City	(1905)	Kansas
St. Louis College of Physicians and Surgeons	(1902)	Illinois
Missouri Medical College	(1874) (1894)	Missouri
Omaha Medical College	(1892)	Nebraska
New York University Medical College	(1898)	New York
University and Bellevue Hosp. Med. Coll.	(1910)	New York
Long Island College Hospital	(1909)	New York
Medical College of Ohio	(1885)	Missouri
Ohio-Miami Medical College	(1911)	Ohio
University of Pennsylvania	(1906)	Penna.
Western Pennsylvania Medical College	(1903)	Penna.
Southwestern Univ. Med. Coll., Dallas	(1908)	Texas
University of Virginia	(1904)	Alabama

Virginia December Report

Dr. R. S. Martin, secretary of the Medical Examining Board of Virginia, reports the written examination held at Lynchburg, Dec. 19-22, 1911. The number of sections examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 58, of whom 25 passed and 33 failed, including one osteopath. Seven candidates were licensed through reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Alabama	(1900)	*
Howard University, Washington, D. C.	(1909) 75; (1911)	78
Johns Hopkins Medical School	(1908)	85
Woman's Medical College of Baltimore	(1903)	*
Maryland Medical College	(1911)	77
University of Michigan, Dept. of Med. and Surg.	(1898)	*
Leonard Medical School	(1911)	76
Columbia University College of Phys. and Surg.	(1908)	*
Woman's Medical College of Pennsylvania	(1909)	86
Jefferson Medical College	(1911)	85
Knoxville Medical College	(1904)	*
Tennessee Medical College	(1908)	*
Medical College of Virginia	(1910) 75, 80; (1911) 75, 75, 78.	
University College of Medicine, Richmond	(1911, 2)	*
University of Virginia	(1901) 84; (1908) 79; (1910)	81
McGill University, Quebec	(1899)* (1911)	88
FAILED		
Howard University, Washington, D. C.	(1911) 72; (—†)	74
University of Louisville	(1911) 64,	67
Kentucky University	(1893)	‡
Baltimore Medical College	(1900)	*
Maryland Medical College	(1909) 63, 67, 73; (1910) 52,	72
College of Physicians and Surgeons, Baltimore	(1891)	*
North Carolina Medical College	(1911)	72
Leonard Medical School	(1910) 68; (1911) 40, 62, 63, 63, 72, 73.	
University of Pennsylvania	(1911)	74
Jefferson Medical College	(1905)	*
Tennessee Medical College	(1911)	64
University of the South	(1908) 59, 73; (1909)	66
University of West Tennessee	(1910) 60, 60; (1911)	55
Meharry Medical College	(1911) 71,	73
University College of Medicine, Richmond	(1911)	72

College	Year Grad.	Reciprocity with
LICENSED THROUGH RECIPROCITY		
George Washington University	(1897) (1905) (1907)	Dist. Colum.
Medical College of Georgia	(1892)	N. Carolina
University of Michigan, Dept. of Med. and Surg.	(1898)	Dist. Colum.
Jefferson Medical College	(1904)	N. Carolina
University of Virginia	(1904)	N. Carolina

* Took oral examination.
† A letter from college says this candidate will graduate in 1912.
‡ Official information received does not indicate graduation.

Arizona January Report

Dr. Ancil Martin, secretary of the Arizona Board of Medical Examiners, reports the written examination held at Phoenix, January 2-3, 1912. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 10, of whom 5 passed and 5 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Drake University	(1900)	76.9
Johns Hopkins University	(1907)	85.4
Barnes Medical College	(1900)	93.5
Medico-Chirurgical College of Kansas City	(1903)	80.9
University of North Carolina	(1909)	83.5
FAILED		
Louisville Medical College	(1908)	71.1
University of Minnesota, College of Medicine	(1900)	73.8
Homeopathic Medical College of Missouri	(1908)	74.6
New York University Medical College	(1898)	71.9
Tennessee Medical College	(1907)	66.6

Book Notices

THE BACILLUS OF LONG LIFE. A Manual of the Preparation and Souring of Milk for Dietary Purposes, Together with a Historical Account of the Use of Fermented Milks, from the Earliest Times to the Present Day, and Their Wonderful Effect in the Prolonging of Human Existence. By Loudon M. Douglas, F.R.S.E. Cloth. Price, $1.50. Pp. 160, with 62 illustrations. New York: G. P. Putnam's Sons, 1911.

"The Bacillus of Long Life" is certainly a pretentious and attractive title for a book. Its basis is, of course, the dream of Metchnikoff, that the persistent consumption of sour or fermented milk destroys poison-producing bacteria in the intestinal tract of man and replaces them by long-life-bringing bacteria. Unfortunately, the investigations which are supposed to bear out this theory are not above criticism, although the author takes the stand that they are indisputable. After considering the results of these investigations, coupled with statements from Metchnikoff's book "The Prolongation of Life," the author thinks it but a short step to conclude that the *Bacillus bulgaricus* may claim to be the bacillus of long life.

There are several interesting and meritorious chapters in the book. The accounts and historical data of fermented milks used by different races are of considerable value. Following these, the chemistry of milk is popularly discussed. It is a pity, however, that the author has permitted untrue statements to creep in; for instance, the interpretation of lactometer readings are obsolete and an erroneous statement is made with reference to colored milk, which in nearly all cases is caused by microorganisms rather than by food material.

The bacteriology of milk is taken up next at some length. Names of lactic acid bacteria and facts are hopelessly confused and misstatements are not lacking. The name *Streptococcus lacticus* is credited to Grotenfelt instead of to Kruse, and *Bacillus lactis acidi* in one place is grouped with *B. bulgaricus*. This is a serious mistake. The statement that *Streptococcus lacticus* and *B. lactis acidi*—which, by the way, are identical—are incapable of growth at blood temperature is contrary to all experience.

If statements on scientific subjects are to be embodied in a popular book they ought to bear scientific scrutiny, otherwise they will mislead the reading public. The apparatus described for the preparation of sour milk is simple and efficient. The last chapter (on soured milk in health and disease) discusses the physiologic action of sour milk from an optimistic point of view rather than from experience and fact. The book will undoubtedly gain considerable popularity, but from a scientific point of view is of little value.

DELAYED AND COMPLICATED LABOR. By Robert Jardine, M.D. (Edin.), M.R.C.S. (Eng.), Professor of Midwifery in St. Mungo's College, Glasgow. Cloth. Price, $3. Pp. 351, with 107 illustrations. New York: William Wood & Co., 1912.

The present volume represents the author's personal experience and much of the matter has already appeared in a larger work on clinical obstetrics. The subject is clearly presented and the material well arranged. The subject of eclampsia receives a considerable amount of attention. Four of the twenty-three chapters are devoted to obstetric operations. The descriptions and directions are clear and explicit. The book is well illustrated, three colored plates showing the condition of the kidney and liver in eclampsia. The book, while intended for students, will also be useful to practitioners who wish a handy guide in difficult cases.

LEITFADEN DER ELEKTRODIAGNOSTIK UND ELEKTROTHERAPIE. Von Dr. Toby Cohn, Nervenarzt in Berlin. Paper. Price, 6.60 marks. Pp. 212, with 71 illustrations. Berlin: S. Karger, 1912. Edition 4.

Among the many excellent features of this small volume one is to be especially commended, namely, the insertion of colored plates, on which the muscles are in black and the motor-points and nerves are in red. This arrangement enables the average practitioner to find the motor-points for diagnosis readily. Although the present edition has been brought up to date, the general arrangement is the same as in former editions, and the changes are not radical.

V. 5
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TREATMENT OF NEURASTHENIA BY TEACHING OF BRAIN CONTROL. By Dr. Roger Vittoz. Translated by H. B. Brooke. Cloth. Price, 85 cents or 3 shillings 6 pence net. Pp. 117. New York: Longmans, Green & Co., 1911.

This is a book for laymen, purporting to give advice in the self-treatment of neurasthenia. Incidentally the author relates his own theories and achievements. Among other things he asserts his ability to count the brain-beats and to judge of the character of the nervous system by the mere placing of his hand on the patient's forehead. The putting forth of these wild theories and boastful assertions does not seem without a purpose. We learn that the author of this booklet owns and operates a sanatorium in Europe which is patronized by the wealthy idle. The intelligent layman, who has in our own country run the gauntlet of the various faith-cults, will hardly fall into this new trap.

Medicolegal

"Irresistible Impulse" Doctrine at Its Worst—Test of Responsibility for Crime

(*State vs. Hoosing* (Ore.), 118 Pac. R. 195)

The Supreme Court of Oregon, in affirming a conviction of wife murder, holds that certain requested instructions were properly refused, as presenting the "irresistible impulse" doctrine at its very worst. They were that before the jury could find the accused guilty they must find from the evidence, and beyond a reasonable doubt, that he had sufficient mental capacity to distinguish between right and wrong as applied to the act he was about to commit, if he did commit it, and sufficient capacity to be conscious that the act was wrong, and at the same time sufficient will power and self-control to restrain himself from the commission of such act. That, in order to convict a person of a crime he must have a memory and intelligence enough to know that the act he is about to commit is wrong, to remember and understand and to know, if he commits the act, he will be subject to punishment, and reason and will sufficient to enable him to compare and choose between the supposed advantage and gratification so obtained by the criminal act, and the immunity from punishment which he will secure by refraining from it, and, having so contemplated the act, the will and controlling power to restrain himself from committing it.

The court further says of these requested instructions that they entirely ignored the difference between an impulse to kill, arising from mental disease or from "sudden and sufficient provocation," and one which springs from anger, or a wicked and furious desire for revenge. Whatever may be the rule in other jurisdictions, the test of insanity in Oregon is the capacity to distinguish between right and wrong. The statute provides that "a morbid propensity to commit prohibited acts, existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defense to a prosecution therefor." The intent of this statute is to establish a conclusive presumption that a person having sufficient mentality to know that an act is wrongful and unlawful is capable of governing his conduct by that knowledge, and of resisting any impulse to violate the law.

Briefly, the evidence disclosed that the defendant, for some time before the killing, had beaten and abused his wife, and, in one instance, driven her from home; that he had been arrested for threatening to kill her, and on his promise to leave her alone had been allowed his liberty; that, on her refusal to again live with him, he waited at a dark corner, and, after she had fallen in an attempt to escape from him, shot her to death, and afterwards expressed satisfaction at the deed. The selection of the place, the instrument, and the time to consummate the act showed deliberation and premeditation, and a knowledge of its wrongfulness. Independent of the statute, the weight of authority is against the doctrine that a defense of an irresistible impulse to kill can be upheld in any case in which there exists sufficient mentality to know the wrongfulness and unlawfulness of the act.

The power to discriminate between right and wrong, as a test of criminal responsibility, has been adopted by a large majority of the courts of the United States, including Oregon. On the other hand, a few courts have admitted with some reservation the theory that an uncontrollable impulse, superinduced by mental disease, even though accompanied by capacity to distinguish between right and wrong, is a defense to crime. Dr. Maudsley, an eloquent champion of this theory, remarks: "There is a destiny made for a man by his ancestors, and no one can elude, were he able to attempt it, the tyranny of his organization." It is submitted that these writers, and the judges who have adopted their opinions, have dealt with man's moral responsibility as between his Creator and himself, rather than his legal responsibility as a member of organized society. It ought to be plain that if every case tried should involve an investigation of the defendant's ancestry and environment, with a view to determine to what extent these influenced the free and untrammeled action of his will, and how far, in view of these, he was morally responsible for his acts, the investigation would be interminable. While one of the incidental objects of the law is to reform offenders, where they are reformable, its principal object is to protect society, and the only practicable working theory on which it can proceed is to assume that every man who knows right from wrong can observe the right and avoid the wrong.

Counsel for the defendant adverted to the sad consequences and injustice of executing a man in the defendant's mental condition, but the jury found that he knew right from wrong, and understood the nature and quality of the act, and this court must assume, in the absence of error by the trial court, that they found correctly. The duty of condemning any human being to suffer the extreme penalty of the law is one which every court approaches with regret. But if the prayer of his innocent and helpless wife was not sufficient to prevent the defendant from sending a bullet through her brain, as she lay fallen and defenseless before him, no mere considerations of sympathy or pity ought to induce the ministers of justice to bend the law to spare him.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Urological Association, New York City, April 2-4.
Arizona Medical Association, Bisbee, April 7.
California State Medical Society, Del Monte, April 16-18.
Georgia Medical Association, Augusta, April 17-19.
Louisiana State Medical Society, New Orleans, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.
New York State Medical Society, Albany, April 16-18.
South Carolina Medical Association, Columbia, April 16-18.
Tennessee State Medical Association, Chattanooga, April 9-11.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH

Held in Chicago, Feb. 26-27, 1912

(*Continued from page 727*)

Medical Education in the South

DISCUSSION ON THE PAPER OF PRESIDENT CRAIGHEAD

PRESIDENT S. E. MEZES, University of Texas, Austin: Medical education in the South is not very different from medical education the United States over. I do not believe that there are as many thoroughly bad medical colleges in the South in proportion to the population and I will admit also, that there are not as many thoroughly good medical colleges as there are in the other sections of the country. We have fewer problems there than you of the North and East have. A comparatively small number of colleges should be put out of

business. Some of them have gone; more will go out. We have been helped in getting rid of these colleges by Dr. Flexner's report, by the activities of this conference, and by the growing efficiency of the state boards of medical examiners. In Texas the situation is improving with considerable and very commendable rapidity. I believe we are going to have before many years two strong medical colleges there. We have one medical school—the University of Texas—which is in Class A. We have another which is approaching that and which doubtless will reach that standard. Just how soon rests with this body. There is no reason why, so far as the South is concerned, this conference should not use all its influence toward a standard of one year of college education as a preliminary to medical education, and that can be wisely done now.

PRESIDENT EDMUND JAMES, University of Illinois, Springfield: During a recent trip to Berlin, Germany, I found there were in that city more frauds of all kinds engaged in the work of curing people than even in the great city of Chicago. That is pretty strong. I read the newspapers there with great interest and saw advertisements of all kinds of methods of cures. I asked one or two physicians how it was that, in a country with such high medical standards as Germany had and with such rigid medical examinations, it was possible to have such an immense number of fraudulent enterprises in the field of curative practice, and my attention was called to a fact which I was not fully aware of before, namely, that the practice of medicine in Germany is an open profession if one chooses to take life in his hands. In Illinois a man cannot practice medicine and prescribe drugs without having passed a state board examination and receiving a license from the state for that purpose. In Germany, I was told, that is not required. If any one is willing to take the risk on himself of prescribing drugs for some one else in trying to cure him, he may do so, provided in doing that he does not kill. If he kills the patient for whom he prescribes, he will be sent to the penitentiary in case it can be proved that he actually did kill. The licensed physician, who has taken a doctor's degree that has the university stamp on it may kill without any danger of prosecution. (Laughter.) But the man who has not a license takes his life in his own hands when he undertakes to treat people.

DR. RICHARD H. WHITEHEAD, University of Virginia, Charlottesville: I doubt if there is a single southern state which is able unassisted to build, equip, organize, and maintain a modern medical school which will meet adequately the exigencies or demands of our modern ideals. The presidents of our best universities are natural leaders in education, and after they have seen what modern medicine can do and what service can be rendered to the public I am sure they will not be disobedient to the duty of raising the standard of medical education. We are justified in a certain amount of optimism about the future, and I would say to you, "Don't worry about the South."

The Conjoint Board of England

Mr. F. G. Hallett, London, England, read a paper on the organization and methods of the board, of which he is secretary. The article appears in full in the department of Original Articles in this issue. The discussion on Mr. Hallett's paper was in part as follows:

DR. GEORGE H. MATSON, Secretary of the Ohio Board, Columbus: That a system of conducting these practical tests may be carried out by state boards in a small way I think there can be no doubt, even with the small fees which we now exact. I do not mean to say that we can carry out this practical examination as Mr. Hallett has detailed it to us, but we can certainly carry out a practical examination which will lead the medical student to better thinking and will lead the medical colleges to do better work. What is the purpose of these practical examinations? We all agree in the answer primarily that they are conducted for the purpose of preventing from practicing those who are unqualified and those who have insufficient medical knowledge. Second, we have these examinations in order to compel the medical colleges to do decent work. The medical boards, as was stated in the address of Dr. Bevan this morning, have been and are to-day the leading factors in pointing the way to higher standards. Methods of written examinations have become largely obsolete, and the time is opportune for us in a meagre way to adopt practical tests. These practical tests will determine the qualification of the applicant. They will determine the quality of the skill; they will protect the sick public from the incompetent practitioner. In eight of the states in this country, since 1908, practical examinations in a small way have been undertaken. Six other states have expressed the intention of conducting practical tests within the near future.

An ideal examination, one conducted with the funds that are placed at the disposal of the average medical board in this country, would in my opinion be somewhat as follows: a written discussion of the assigned topics in practice and therapeutics; a practical examination of minor surgery both on the cadaver and on the living subject; laboratory examinations in histology, pathology, bacteriology, and chemistry; clinical tests in diagnosis. To conduct such an examination we need members of medical boards appointed or elected for their special fitness in giving examinations, and funds should be made available for the employment of competent assistants. There is no trouble at all in getting patients for these examinations; I care not from what part of the country the examiners may come, the importance of securing patients for these examinations cannot be emphasized too much. There is not a poorhouse in this country where patients may not be had for a very small fee to appear for such a test, and there is not a state where examinations can be held that patients cannot be secured from hospitals for examination in either of these subjects, and for a very small fee.

DR. WALTER P. BOWERS, Member of the Massachusetts State Board of Health: In Massachusetts we hold five examinations a year, namely, in March, May, July, September and November, each examination covering a period of three days, and each examination requiring answers to seven important subjects. Early in our history we became convinced that the ordinary written papers at examinations were an inadequate test of the qualifications of the applicant, and we have tried to adopt the method of practical examinations as early as possible. We were limited in our operations by certain things, and among them we had very few facilities for conducting practical examinations. Later we were offered the facilities of the medical schools of Boston. We have taken advantage of these schools, so that now we are giving one full day to practical examinations out of three days. The written examinations are held on the first and second day, and a part of these written examinations is restricted to subjects which may be properly answered in writing and the practical application of certain questions reserved until the third day, and on that day the examination covers a period of from 9 o'clock in the morning until late in the afternoon. The subjects taken up at that practical examination are embraced in clinical medicine and diagnosis; obstetrics by using the manikin and fetus; surgery on the cadaver, the use and application of splints, and the tying of ligatures, etc., together with a complete practical examination in anatomy.

DR. JAMES W. HOLLAND, Philadelphia: The first thing for us to do is in some way to get such a change in our civil service regulations that an officer can be appointed with special aptitude and with a certain tenure of office, one which will enable him to devote all his energies, all his thought to the work in hand. I do not suppose there is any one here who would dispute for a moment that the best examiner, other things being equal, is an experienced teacher. The experienced teacher is also an experienced examiner, but it is either expressed or understood in every state in the Union that the examiner shall not be a teacher. In our state it is either understood or stated in the law. We have a new law, so I am not certain on that point, but it would raise a storm around the head of a governor who would dare to appoint on the board of examiners a teacher in a medical school. The consequence is that, unless our examiners be made up of men who are reliable, as they should be, we fall short of perfection. They cannot have had the experience that medical teachers have had.

With reference to securing patients, we cannot always obtain the consent of the physician or the surgeon of the hospital to take his patients away from him to another place and have them examined and have his diagnoses commented on by other persons. So here we have another difficulty to contend with. It is only in a large city where many hospitals are situated that physicians and surgeons of great expertness can bring their patients of all sorts for examination purposes.

DR. F. F. WESBROOK, Minneapolis: This method which has been worked out by Mr. Hallett is very admirable, and while it looks out of reach for us at the present time, it is no more out of reach than the betterment of our medical colleges was five or ten years ago. We are already engaged in the betterment of our teaching mechanism, and in spite of the tremendous initial handicaps, this has been very considerably benefited, so that four of the best medical schools in the United States need not make any apology in view of the situation when we compare them with other medical colleges of the world. But I believe that having taken such pains, as the best institutions have done, to prepare students for the practice of medicine, we ought by some means or other take great pains in determining whether a student is really fit to practice medicine or not. As to practical examinations, the board in our state can get patients from the county hospital or from the dispensary. There is no trouble in getting them. The difficulties I have heard mentioned in this country are not insuperable. The only thing is to go at the matter rightly. The first thing is to get money, and this must come from the students or candidates, or from the state in the form of an appropriation.

DR. JOHN A. WITHERSPOON, Nashville, Tenn.: I agree with Dr. Wesbrook, that we will reach some day the standard of practical examinations as carried out in England. We owe a debt of gratitude to Mr. Hallett for the very fine address he has given us and for the practical enforcement of what seems to be a practical examination to which this country not only aspires but I trust will soon reach.

MR. F. G. HALLETT: We did not develop this system of examination in five years or in ten years, and I do not suppose you will reach our standard in this country in a very short time, but that you can reach it, if you want to do so, I have not the slightest doubt whatever, and probably you will evolve a much better examination than we have done. A point of great importance will be the education of public opinion so as to get the state boards in sympathy with medical education.

CONFERENCE ON MEDICAL LEGISLATION AND PUBLIC HEALTH

The Conference on Medical Legislation and Public Health was held at the Congress Hotel, February 27, with Dr. Henry B. Favill, Chicago, in the chair. After introductory remarks by the chairman regarding the scope and work of the conference, the secretary, Dr. Frederick R. Green, presented his report.

Report of Secretary

The Council on Health and Public Instruction, at its annual meeting in October, adopted a program of activity for the coming year, embracing four fundamental lines of work which it was felt could be developed and made the foundation of the work of the future. These were: 1. The further development and extension of the press bureau. 2. The organization of a speakers' bureau for the purpose of supplying speakers for public meetings on health topics to be held under the auspices of county or state medical societies, women's clubs, local public health leagues, teachers' institutes, farmers' institutes, normal schools, college, university and high school faculties, etc. 3. The compilation and publication of a hand-book for speakers containing the essential facts and figures for a successful public health propaganda. 4. The formulation of a platform setting forth the principles of the Association and what it stands for in public health matters.

Probably the most important feature of the council program is the drafting of a platform setting forth the plans and purposes of the Association, and especially its relation to the public. In the sixty years of the existence of the Association this has never been done. A clear and official statement will be of the greatest value before the public. This matter has been under careful consideration for several months past, and it is hoped to present a definite report at the Atlantic City session.

Resolutions Offered

The chairman then appointed the Committee on Resolutions, consisting of the following members: Drs. B. M. Caples, Waukesha, Wis.; E. J. McKnight, Hartford, Conn.; J. F. Percy, Galesburg, Ill.; S. J. Crumbine, Topeka, Kan.; Colonel M. W. Ireland, U. S. A.; E. S. Kelley, New Orleans, and the Secretary, *ex officio*.

DR. ANTONIO H. MOLINE-DE-ST.-REMY, Porto Rico, offered a resolution calling for a model bill for state examining boards.

DR. WILLIAM C. WOODWARD, Washington, D. C., moved as an amendment that the trustees of the American Medical Association be requested to make such appropriation as may be necessary. The resolution and amendment were referred to the Committee on Resolutions.

DR. J. N. MCCORMACK, Bowling Green, Ky., offered the following resolution, which was unanimously adopted:

Resolved, That the Council and Board of Trustees and other activities of the Association be urged now to make such provision as may be necessary to further the work of national legislation at Washington and carry out the resolutions adopted at the Los Angeles session of the American Medical Association; and that provision be made for the necessary traveling expenses and other expenses of persons who may be selected to aid in furthering this work.

DR. WILLIAM C. WOODWARD moved that the Council be requested to prepare a model bill for the prevention of ophthalmia neonatorum. Referred to the Committee on Resolutions.

DR. E. J. GOODWIN, St. Louis, moved that the conference appoint a committee to bring up to date vaccination and small-pox statistics. Referred to the Committee on Resolutions.

DR. B. R. MCCLELLAN, Xenia, O., offered a resolution calling for a Committee on Vital Statistics Legislation. It was referred to the Committee on Resolutions.

Present Status of Vital Statistics in the United States

DR. CRESSY L. WILBUR, Washington, D. C.: The chief need for work at the present time in the North is in the states of Illinois and Iowa. In the South active work is being done for registration. Texas and Louisiana are doing good work. Missouri, Kentucky, Virginia and North Carolina are doing excellent work along the line of registration, and we believe the time is not far distant when we will have complete registration of vital statistics in all states.

The Essentials of State Legislation on Foods and Drugs

MR. E. F. LADD, State Commissioner of Foods and Drugs, Fargo, N. D.: Some of the things which I would consider as essentials in food and drug laws may be enumerated and discussed under various heads, as follows: 1. The law should exclude all harmful and deleterious ingredients. It should enumerate in the body of the statute itself those products which should be excluded, as far as known, when the law is enacted, and provide for the further exclusion of injurious products of like character. In such an act I would exclude boric acid, salicylic acid, benzoic acid, sulphurous acid, hydrofluoric acid, and all salts and antiseptic compounds derived therefrom, formaldehyd, fluo-borates, fluo-silicates, or other fluorin compounds, dulcin, glucin, saccharin, caffein, betanaphthol, hydronaphthol, abrastol, asperol, cocain, oxids of nitrogen, compounds of copper or alum, nitrous acid or nitrites, pyroligneous acid, or other added ingredients deleterious to health.

2. Let the statute exclude all deceptive coloring of whatever character, including coal-tar dyes, the use of which is for purposes of deception, enabling the manufacturer to utilize material unfit for human consumption.

3. Let there be truthful labeling; let every label tell the truth and nothing but the truth. If there is a man who wants cocoanut and olive stones ground up for his pepper, let him

have it, but let the label clearly and truthfully state that such is its composition.

4. All false claims and advertising matter should be regarded as an essential part of the description and should be amenable to the law. Any false statements or claims either with regard to the composition, properties or uses of the products should be prohibited either in the act providing for food laws, or in those providing for drugs, patent medicines, or proprietary products.

5. Every article should be so labeled as to show the true net weight, measure or numerical count, whether a food, beverage, drug or medicine. Reasonable variations should be permitted and tolerances therefore provided.

6. The food law should not exclude from use any wholesome article of food, so long as it be sold under a truthful label.

7. No preparation should be permitted to be put on the market which contains cocain or derivatives of this product or wood alcohol, which products are intended to be used either internally or externally. The use of cocain should be restricted as much as possible.

8. The presence of all habit-forming or deleterious ingredients should be distinctly shown on the label and the amount thereof per ounce, or dose, or tablet, as the case may be.

9. Provisions should be made in the act itself so that the commissioner or executive officers who have the enforcement of the law to look after, shall be completely removed from political influences. How can we expect that the law shall be enforced strictly by a commissioner who has been appointed because of his political influence and where the commissionership is used as a political football to further the interests of some aspirant to a higher position.

10. I would have all state food laws in harmony with the national law, as far as the same can be harmonized without lowering the efficiency and effective working of the state law.

One of the greatest evils of our day, in my judgment, is the number and kind of "patent medicines" found on the market. Many of these are without any real medicinal value whatever, and others so labeled as to be dangerous, or so falsely labeled as to make them frauds, pure and simple, the false claims made for them overshadowing any virtue which they may possess.

What is Railway Sanitation and How Can It Be Obtained?

DR. ARTHUR M. HUME, Owosso, Mich.: Sanitation is defined as "the devising and applying of measures for preserving and promoting public health"; therefore, practical sanitation is not the exploiting of untried theories and opinions, but the adaptation of methods of proven value. Sanitary science has been created only through the life-time work of scores of men especially skilled along these lines. Legislators who have given no special thought to this subject cannot draft proper sanitary laws. In the absence of a national health department, sanitary laws should emanate from state boards of health, they being the highest legally constituted health authorities.

The greatest problems of railway sanitation are those arising from the transportation of passengers. In railway cars there should be pure air, of proper temperature, pure water to drink, pure food to eat, clean beds in which to sleep, and a proper disposition of excreta. To provide these requires all the executive ability of the operating management, the skill of the car builder, and the science of the sanitarian combined.

Railway companies are willing to comply with every reasonable sanitary law, but their efforts should be directed by a competent sanitarian, trained in railway work. A good railway sanitarian is one who knows what is required, and who has practical methods and means for obtaining it. There should be a uniformity of regulations in railway sanitation, especially as to construction and equipment of passenger cars, in order that once properly equipped and thus maintained, they may comply with the laws of all states in which they are operated. By conference and united action between public health officials, railway managers and sanitarians generally, a perfect working system of railway sanitation can be obtained.

DISCUSSION

DR. T. R. CROWDER, Superintendent of Sanitation, Pullman Car Company, Chicago: I would define railway sanitation as that department of public health which deals with and combats the dangers to life and health brought about by the existence of the railway and by its operation. Primarily, it concerns the safety of the traveler and of the railway personnel. The safety of the traveler depends largely on the health, the vigor and fitness of those charged with operation. It is conceivable, furthermore, that the operation of the railway may affect in no small degree the health of the people living in communities through which it passes. Infectious diseases must constitute the great central thought about which all our sanitary reasoning must be grouped. Dr. Hume has suggested those factors of the railway property which should be considered chiefly in their relation to infectious diseases, namely, railway sufficiency, railway care, and the railway right of way. I would add another consideration which is in my opinion of paramount importance, and that is the effect that the railway may have on the spread of epidemics by reason of the fact that it transports people and animals and freight through widely dispersed territories. The railway may be largely responsible for the rapid spread of such epidemics as we have had in past years, of influenza, for instance. The danger of infection of the passenger from the railway may rest on three facts: 1. The transmission may be brought about from person to person, and this is undoubtedly by far the most important means of transmission. 2. It may be brought about by the use of inadequate car facilities for comfort and convenience. 3. It may be brought about by the infected car, in which disease is transmitted from occupants at one time to future occupants of the car. We are coming more and more to believe in recent years that by far the greater part of the transmissible infectious diseases are transmitted directly from person to person, and that fomites play a minor part in this. We are coming to realize that people and not things are the agents of transmission as well as the sources of infection. We can control in great measure the spread of infectious diseases by excluding infected persons from amongst the travelers.

DR. SAMUEL J. CRUMBINE, Topeka, Kan.: In railway sanitation it is a question of dealing with the people who travel as well as with the railroad companies in providing proper service and proper methods of cleanliness. I do not think it is up to state and local boards of health to determine who are sick and who shall not be permitted to travel. It would be impossible for local or state boards of health to do that. There should be certain rules for cleansing and disinfection of cars which would meet the situation in the best possible way. The matter of track pollution has been greatly exaggerated.

DR. WILLIAM A. EVANS, Chicago: Dr. Crowder has called attention to the fact that persons rather than things are largely responsible for the spread of disease. This is unquestionably correct. His suggestion that in that way we can account for the epidemics that spread rapidly is a good one, since nothing travels over so much space as passengers, except air, and I think it has been demonstrated that air is not potent in conveying bacteria long distances. He has suggested that infected passengers can be carried by trains, and this applied to infected animals, and he could have added infected insects. Typhoid flies and mosquitoes infected with malaria and yellow fever are carried some distances from the points at which they originally gained access to the cars.

DR. W. L. ESTES, South Bethlehem, Pa.: There is one point which, without serious economic difficulty, railroads might attain to, and which would greatly conserve the public health, and which I tried to bring out ten years ago. After discussing the utility of the hospital cars, with regard to first aid, I suggested that hospital cars might solve the chief difficulty in regard to the transmission of diseases in transit. I tried to show not only from an economic standpoint, but from a practical point of view, that it was possible for each trunk line to maintain half a dozen hospital cars, according to the extent of the line, which would serve the purpose only to carry known cases of infection. In order to obtain data in

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regard to these cases, it would be necessary to have the statement of the family physician and the cooperation of health boards, and the plan must be national in its scope. If such an arrangement could be made with the railroads, it would be practicable in an economic way, and if sanitarians would insist on it, it would solve to a great extent the danger from many cases which railroads are obliged to transport and which we see, under our present laws, no possible way to avoid unless by some such arrangement as this.

DR. H. B. HEMENWAY, Evanston, Ill.: With reference to track pollution, Major Ross in his book on "Prevention of Malaria" shows that the problem of controlling malaria has been reduced to a mathematical question. He shows the proportion of infected persons to the general population, a line of thought that most physicians have ignored. I think it can easily be demonstrated that the possibility of infection from the track or from the pollution of water-supplies is reduced to an infinitesimally small degree, so that it is something that might be ignored absolutely. The only practical way that the possibility of typhoid infection along the tracks can be carried to the people would be through the presence of the house-fly as a carrier of the germ from the track to the house. It has been my experience in inspecting tracks not to have found the house-fly on the excreta along the tracks. The flies that are found there are not house flies. They are not flies that carry infection to the food.

DR. DIXON, Michigan: In my connection with the Michigan Board of Health I have found the railroad managers agreeable people. In every instance, when I have had occasion to refer the general manager of a railroad system to certain conditions which somebody had reported, the matter received prompt attention, and every specific case has been taken care of and remedied. What we need in Michigan is a sane law, and then, on the part of the railroad management, a supervisor of sanitation with whom we can deal directly.

DR. J. N. MCCORMACK: The Pullman Car Company has made and is making ample provision to do its part in connection with the public health problem. I have been much interested in the method of ventilation which Dr. Crowder has proposed. I believe it is in the right direction. He thinks it is all we need. I hope he is right, but sometimes, after sleeping in a Pullman car, I have had a doubt, and like the man from Missouri, I want to be shown. However, Dr. Crowder is doing a great work and he is entitled to the commendation of the people of this country. It is pioneer work and done in a scientific spirit and with the intention of getting results that will benefit mankind.

DR. M. P. RAVENEL, Madison, Wis.: In regard to Pullman car sanitation, I have seen men on Pullman cars spit in the dental lavatory, and then the next person, before using it, would take a face towel and wipe it out. Within three months I saw a man using the drinking glass or tumbler and wash his tooth brush in the tumbler. If that man were a typhoid carrier, a pneumonia carrier, or a carrier of tubercle bacilli, there is direct contact from man to man.

DR. J. W. COBB, U. S. P. H. and M.-H. S.: We must find out accurately if it is possible to infect a person in these cars, and yet, considering all the work that Dr. Kinyoun did with reference to car sanitation, he only found in a few instances tubercle bacilli in the air of the car. At present ways and means are being discussed in our bureau as to the best plan of making an intensive study of this question.

DR. JAMES A. DENNY, Chicago: The only solution of this question must necessarily come from a universal practice adopted by the government, or by the health boards operated by the government. The laws, for instance, of Wisconsin, Illinois and Missouri on this subject are absolutely contradictory. The railroad is a common carrier, and as such, it must carry people who want to ride. If a railroad as a common carrier refuses to carry a person who is sick, that road becomes liable for damages.

DR. H. B. HEMENWAY, Evanston, Ill., offered the following, which carried:

Resolved, That it be the sense of this conference that the Council appoint a committee on railway sanitation.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Medical Research, Boston

February, XXV, No. 3, pp. 409-514

1 *Metabolism of Hypophysectomized Dog. F. G. Benedict and J. Homans, Boston.
2 *Relative Local Influence of Coexisting Tuberculous Inflammation and Cancer in Lung. H. Oertel, New York.

1. Metabolism of Hypophysectomised Dog.—The general effects of hypophysectomy are summarized by the authors as follows: On the body weight: a tendency to retard the normal growth of the animal. Gain in weight is principally due to the deposition of fat. On body temperature: a tendency to slightly lowered body temperature, which may result ultimately in a disturbance of the heat regulation sufficiently profound to produce a very marked drop in body temperature immediately prior to death. On pulse: a marked fall in pulse-rate occurring a few days after operation and remaining at essentially the same level throughout the life of the animal. On respiration: a fall in the respiration-rate approximately parallel and similar to that of the pulse-rate. On total metabolism; a marked fall after operation of the total metabolism as measured by the carbon dioxid production. The fall in carbon dioxid production per kilogram of body weight per hour is still more noticeable owing to the deposition of inert body fat. On development and general appearance: the growth of young animals is checked and their infantile characteristics are preserved. The sexual activity, if not already developed, never develops. If nearly or quite established, it is profoundly affected. The tendency to the deposition of an excessive amount of body fat is sometimes accompanied by thickening of the skin and falling of the hair analogous to changes noticed after thyroidectomy. The change in appearance of older animals surviving a nearly complete removal of the hypophysis is hardly noticeable.

2. Tuberculous Inflammation and Cancer.—Oertel states that neither tuberculosis nor cancer seem to possess specific antagonistic qualities, but that the results of such combinations depend on the conditions of individual cases. Thus it appears probable that an actively malignant, rapidly growing cancer may overcome the resistance imposed on it by an approaching or even freshly implanted tuberculosis inflammation. On the other hand, an actively progressing, virulent tuberculous infection may overgrow an approaching or superadded cancer, particularly if the cancer, like the one observed by Oertel (scirrhus) or by Clement (cylindrical cell carcinoma), is not of the irregular cellular, rapidly proliferating type. Finally, both lesions may coexist and intergrow without any marked influence on one another; they may be equally balanced in power or grow in symbiosis, unless by caseation the tuberculous infection removes the necessary conditions for any growth.

In the light of present knowledge it is not possible to determine whether specific factors enter into this relation; one would have to consider in this connection on the one hand the virulence of tubercle bacilli and toxins with associated productive or exudative inflammations, on the other hand phagocytic or other properties of the cancer cells. The tuberculous inflammation does not differ in its effects from that of other inflammations on cancer. Any inflammation may either overgrow the tumor and thereby tend to check cancerous infiltration, or it may become invaded by cancer or frequently coexist in "symbiosis" or unknown relation.

Any inflammation may even by the production of necrosis impede the cancer progress. Undoubtedly similar reasons for the various outcomes of these combinations prevail in simple or specific inflammations. They may explain therapeutic effect and defect of such means of treatment in malignant tumors. Oertel considers that these variable factors may be of considerable importance in the development and progress of cancerous disease which originates on the basis of inflammatory processes. For this reason, he says, the local relation

of inflammatory processes and malignant growths deserves renewed observation and consideration along the lines which have been outlined above.

Journal of Arkansas Medical Society, Little Rock

January, VIII, No. 8, pp. 217-240

3 *Rheumatism and Infection of Joints. M. G. Thompson, Hot Springs.
4 Cerebral Concussion. J. B. Wharton, El Dorado.
5 Extra-Uterine Pregnancy. J. A. Foltz, Fort Smith.

3. Abstracted in THE JOURNAL, July 8, 1911, p. 157.

Virginia Medical Semi-Monthly, Richmond

February 23, XVI, No. 22, pp. 549-572

6 Necessity for Milk and Meat Inspection. L. A. Klein, Philadelphia.
7 Basilar Headaches and Neurasthenia of Ocular Origin Not Usually Recognized. O. Wilkinson, Washington, D. C.
8 Why Do We Get Our Cancer Cases Late? E. B. Claybrook, Cumberland, Md.
9 Random Therapeutic Notes on Iodin and Iodids. J. A. Burnett, Marble City, Okla.

Yale Medical Journal, New Haven, Conn.

January, XVIII, No. 5, pp. 205-248

10 Gall-Bladder Infection. C. H. Brown, Waterbury, Conn.
11 *Transfusion for Typhoid Hemorrhage. L. S. Booth, New Haven, Conn.
12 *Present Status of Transfusion of Blood. W. E. Hartshorn, New Haven, Conn.

11. **Transfusion for Typhoid Hemorrhage.**—Booth's patient had a typical and serious attack of typhoid, resulting in two severe hemorrhages on the twenty-fourth day of the disease. The reaction of the patient to the acute hemorrhage was perfectly typical, with a subnormal temperature, a scarcely palpable pulse of high rate, cold, clammy sweats and intense thirst. The use of ordinary therapeutic measures such as hypodermoclysis, injections of rabbit and human serum, and the administration of calcium lactate were without any marked effect on the progress of the case, although just how much benefit the patient derived from them, of course, cannot be definitely determined. But with the patient *in extremis* direct transfusion was done with a related blood and a really remarkable effect on the vital signs of the patient resulted. The temperature rose to normal, the pulse improved in quality, and dropped to the approximate level established before the hemorrhages occurred. The transfusion had no effect on the course of the typhoid, as is shown by the recurrence of the temperature three days after the transfusion, and a continuation of the lysis which was already inaugurated before the hemorrhages occurred. What the transfusion did was to restore the ground lost by the patient from the acute depletion of the cardio-vascular system. The donor had never had typhoid, and the results in this case suggest to Booth the interesting speculation of the possible good to be obtained from the use of a donor who had previously been immunized to the disease.

12. **Transfusion of Blood.**—In Hartshorn's opinion the Elsberg cannula represents to the average surgeon the method of transfusion best adapted to his needs. Transfusion by means of vein-to-vein anastomosis presents far less difficulty than that of vein to artery and accomplishes equally good results. Hemorrhage represents the one satisfactory application for the transfusion of blood. A thorough laboratory experience is essential in order to secure a competent technic.

American Journal of Urology, New York

February, VIII, No. 2, pp. 59-114

13 Prostatectomy and Its Indications in Prostatic Hypertrophy. T. Rovsing, Copenhagen.
14 Ureteral Catheterization as Therapeutic Measure. H. Lilienthal, New York.
15 Two Cases of Pneumoscrotum Following Nephrotomy. E. L. Keyes, New York.
16 Echinococcus Cyst of Kidney. W. E. Leighton and B. Lewis, St. Louis.
17 Nephrectomy in Bilateral Pyelonephritis; Recovery. M. Krotoszyner, San Francisco.
18 Vesical Calculus with Multiple Recurrences. A. Hyman, New York.

New York State Journal of Medicine, New York

February, XII, No. 2, pp. 55-104

19 Science and Art of Surgery as Applied in Treatment of Fracture of Neck of Femur. R. Whitman, New York.
20 Indispensableness of Animal Experimentation and Immorality and Cruelty of Antivivisection. W. J. Robinson, New York.
21 Health Officer and Laboratory in Relation to Public Sanitation. C. Stover, Amsterdam, N. Y.
22 Relations of Health Officer to Medical Profession and to Public. F. Overton, Patchogue, N. Y.
23 Cesarean Operation. J. W. Poucher, Poughkeepsie.
24 Lactic Cultures; Some Clinical Observations. E. I. Harrington, Yonkers.
25 Value of Urinary Examination in Infants. F. Van Bogert, Schenectady.
26 Importance of Early Operation in Acute Mastoiditis. L. A. McClelland, Brooklyn.
27 Some Facts Concerning Faucial Tonsils and Their Complete Removal. J. F. McCaw, Watertown.
28 *Pelvic Surgery in Relation to Periodic Headaches and Neuralgia. H. P. Groesbeck, Schenectady.
29 *Precaution to Be Taken in Making Benzidin Test for Occult Blood in Test-Meal. S. Florsheim, New York.
30 Typhoid State. W. N. MacArtney, Port Covington.
31 Huntington's Chorea. L. C. Lewis, Belmont.

28. **Periodic Headaches.**—Groesbeck believes that removal of both ovaries in case of menstrual headache should be done as a last resort after all other attempts at cure have failed and in cases in which cessation of menstruation is preferable to the terrible monthly suffering of neuralgia or hemicrania.

29. **Precaution in Benzidin Test for Occult Blood in Test Meal.**—Over 150 tests were made in Floersheim's laboratory with different collections of prunes taken either from patients' stomachs or from the cupboard. In every instance a positive test for blood was obtained in the benzidin solution. Likewise every test proved negative to aloin and guaiac. Immediately on floating the ethereal extract of the prunes (prepared exactly as from a test meal) on the ozonized benzidin solution, a cloudy field having a distinct greenish tinge was produced. The reaction in many of the tests would become marked within ten minutes; in other cases the distinct dark green reaction was obtained as early as half a minute, while in still other experiments the reaction was delayed upward of four hours. The different specimens of prunes gave quite different time reactions, but in every case and laboratory experiment a positive blood test was obtained. Floersheim suggests that it would seem that the prune contains a substance which reacts to benzidin; hence the precaution that should be taken.

Journal of Tennessee State Medical Association, Nashville

February, IV, No. 10, pp. 391-430

32 Cesarean Section for Puerperal Eclampsia; Report of Three Successful Cases with Three Living Children. W. D. Haggard, Nashville.
33 Pellagra; Report of Case. K. S. Howlett, Franklin.
34 Chronic Pelvic Inflammation. H. M. Tigert, Nashville.
35 Calcium Sulphid. M. A. Blanton, Baileyton.
36 Dystocia. S. S. Duggan, Eagleville.
37 Modern Tonsil Surgery. W. Dotson, Gallatin.
38 Present Status of Roentgen-Ray in General Diagnosis and Treatment. H. Padgett, Nashville.
39 Pneumothorax. J. Clifton, Hickory Valley.
40 Relationship of Food to Disease. E. A. Timmons, Columbia.

Ophthalmic Record, Chicago

February, XXI, No. 2, pp. 57-111

41 Small Round-Cell Myosarcoma of Orbit with Extension Into Eyeball. W. C. Posey, Philadelphia.
42 *Unusual Case of Steel Injury. F. Allport, Chicago.
43 Keratoconus; Report of Case. C. W. Le Fever, Philadelphia.
44 Variation in Axis of Astigmatism in Distant and Near Vision. F. C. Todd, Minneapolis.

42. **Steel Injury of Eye.**—Two years ago a boy, aged 17, was hit in the right eye by a piece of steel which perforated the cornea and lens, but did not remain in the eye. A cataract was produced which gradually absorbed, leaving him with a vision of 20/720 with correction. Nov. 27, 1911, while striking two hammers together he was again struck, this time in the left eye, by a piece of flying steel, which perforated the upper eyelid, cornea, iris and lens. Allport approached the giant magnet to the eye but obtained no response. He then opened the sclera, between the external and inferior recti muscles and used the magnet freely, but with no result. The conjunctiva was sutured. There was no reaction, but desiring to keep him quiet for a few days, a Roentgen-ray picture was not taken until December 3. It showed the steel was located almost exactly in the center of the field and between 24 mm. and 25 mm. from the surface of the cornea. A normal eye being about 24½ mm. long it was hard to know whether the steel was in the sclera or back of it. It seemed as if the steel was in the socket. About this time the eye, which had

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previously looked remarkably well, began to show unmistakable evidences of trouble. The tension rapidly diminished, pain on pressure developed and the ciliary injection became more and more marked. December 11, Allport determined to search the socket for the steel, and therefore freely incised the conjunctiva over the external rectus, and after passing a suture through it (in order to be able to re-attach it to the eyeball if found desirable), cut it off and thoroughly explored the socket with the magnet and carefully and effectively inserted between the conjunctiva, capsule, etc., and the sclera of the eyeball. No reaction was obtained, but the eyeball was found to be much softer than had been supposed.

Allport then determined to make a last search for the steel in the eyeball and therefore opened the sclera in its extreme posterior portion, and used the magnet in the opening, with no result. He sutured the opening to prevent collapse of the eyeball during enucleation, and then removed the eyeball. The steel had passed completely through the eyeball and was found in a small mass of exudate which was attached to the eyeball. The eyeball was opened and a beginning purulent ophthalmitis was found at the ciliary region. A red exudate mass was found at about the macula, where the steel had perforated the posterior portion of the eyeball. The case is interesting as showing the strange fatality of a steel injury in both eyes. It is also interesting as showing the difficulty of locating steel, even by skilful radiographs, accurate measurements and "moving" pictures. It also demonstrates how little damage may be expected from a perfectly executed scleral opening.

Medical Record, New York

February 24, LXXXI, No. 8, pp. 351-400

45 Heart in Syphilis. H. Brooks, New York.
46 Quantitative Estimation of Trypsin and Amylase in Feces and in Duodenal Contents. G. A. Friedman, New York.
47 Colon Bacillus Infection of Urinary Tract. R. M. Rawls, New York.
48 Epithelia Found in Urine, and Their Differentiation, as Aid to Correct Diagnosis. A. T. Gaillard, Philadelphia.
49 Use of Definite Temperature in Treating Disease and Destruction of Gonococci. J. A. Fulton, Astoria, Ore.
50 Bacterin Treatment in Pulmonary Tuberculosis. G. Sanders, New York.
51 Small, Quickly Made Sterilizer. D. H. Stewart, New York.

March 2, LXXXI, No. 2156, pp. 401-450

52 Failure of Colon to Rotate. C. H. Mayo, Rochester, Minn.
53 New York Quarantine. T. M. Prudden, New York.
54 *Case of Fulminating General Paralysis. A. S. Leverty, New York.
56 Overcrowding and Defective Housing in Country Districts. H. B. Bashmore, West Fairview, Pa.
57 Perforation of Cecum by Enterolith; Fracture Dislocation of Cuboid. F. R. McCreery, New York.
58 Orchitis with Unusual Features. L. B. Bangs, New York.

54. Fulminating General Paralysis.—The case which Leverty reports presents three interesting features: First, the extragenital seat of the initial lesion. Second, the rapid and furious course of the disease. Third, the report of the findings of the autopsy as the disease was in a relatively early stage. Male, age 45, finger infected in 1900, syphilitic monoplegia in 1909, cured. First symptoms of paresis January, 1911; death from paresis three months later. Autopsy, characteristic findings of paresis. The patient was in good health up to the time of his infection in March, 1900, eleven years ago. The chancre appeared on the index finger of the right hand and was the result of a libidinous manipulation of the genitals of an infected woman.

At first he thought it was a "runaround" and treated it with bread poultices and did not consult a physician until secondary symptoms appeared. He was treated for eighteen months, after which time he discontinued treatment. Contrary to the advice of his physician he married one year after his infection. His first child died of meningitis at less than a year. The patient was of a nervous temperament. His habits had been industrious and at times he had worked very hard, but used no alcohol or tobacco in excess.

In 1906 he complained of being nervous and irritable, of pains in his head, and of inability to apply himself to his work. This condition lasted for a month, when he apparently got well. Three years later, in 1909, he was suddenly attacked with weakness and paralysis of the right arm. With strenuous antiluetic treatment he regained the use of his arm in five weeks. He remained well and attended to his business until the latter part of January, 1911, when he began to express an exaggerated sense of well being.

The somatic symptoms were Argyll-Robertson pupils, tremors of the face, tongue and hands, changes in the deep reflexes, defects of speech and of handwriting. Ten days later he became incoherent, maniacal, and furious and was sent to a sanatorium (February, 1911). The delirious mania continued until his death in April, 1911, less than four months after the onset.

Kentucky Medical Journal, Bowling Green

February 15, X, No. 4, pp. 149-182

59 Treatment of Fractures of Long Bones. G. P. Grigsby, Louisville.
60 Use and Abuse of Strychnin. W. E. Reynolds, Hopkinsville.
61 Cretinism; Report of Case. G. C. Rankin, Walton.
62 Pneumonia. J. P. Wells, Meek.
63 Sepsis and Antisepsis. J. F. Daugherty, Demossville.
64 Needs for Our Kentucky Asylums for Insane. H. W. Wood, Lexington.
65 Pain and Its Significance. A. M. Hayden, Evansville, Ind.

Boston Medical and Surgical Journal

February 22, CLXVI, No. 8, pp. 275-314

66 *End Results of Surgery in Neurasthenics and on Neurasthenia. E. Reynolds, Boston.
67 *Class Method in Home Treatment of Tuberculosis and What It Has Accomplished. J. H. Pratt, Boston.
68 Primary Tumors of Spleen. G. McConnell, Philadelphia.
69 Urinary Infection. B. Tenny and H. M. Chase, Boston.

February 29, CLXVI, No. 9, pp. 315-359

70 Clinician, Hospital and Medical School. D. L. Edsall, St. Louis.
71 Conclusive Tendencies During and After Encephalitis in Children. W. P. Lucas and E. E. Southard, Boston.
72 Self-Retaining Air-Tight Face-Piece for Nitrous Oxid-Oxygen Anesthesia. W. M. Boothby, Boston.
73 Case of Thrombosis of Left Posterior Inferior Cerebellar Artery. J. W. Courtney, Boston.

66. Surgery in Neurasthenics and Neurasthenia.—Reynolds maintains that if after cross-examination of the patient and the family practitioner it becomes evident that the nervous breakdown has preceded the development of the local symptomatology, it may generally be concluded with certainty that that symptomatology is merely a neurasthenic exaggeration of an unimportant difficulty, and in such cases even the existence of a perceptible, but not lethal lesion is rarely an indication for operation. When, on the other hand, the local suffering has appeared first and the progress of the neurasthenia has followed the increasing development of the localized symptomatology, the burden of proof is on him who asserts that the fatigue neurosis is of merely general origin.

Again, the persistence of a symptom unchanged throughout a series of years, and more especially throughout the time which precedes and attends the development of a neurasthenia, is in neurasthenics of much more importance than the degree of complaint that it excites. Evanescent and varying symptoms of great intensity are the characteristics of neurasthenia, but steady reiteration year by year of one unvarying discomfort is indicative of a real lesion, and should this lesion be of such a nature as is capable of producing chronic fatigue or auto-intoxication, it may sometimes be of far more importance towards the production of a neurasthenia than would be judged by the amount of pain or discomfort which it excites. The importance which should be attributed to a chronic auto-intoxication especially is one of the points which has until recently been underestimated.

In determining for or against an operation the patient's vital condition and past history should be estimated as a whole, of which the local condition is only one part. It is only on this basis that a wise decision can be expected. In gynecological work on neurasthenics Reynolds says it is an undoubted general principle that prolonged minor treatment is to be avoided. Even in those instances in which it is locally successful, it is almost certain to be generally deleterious. The removal of lesions by radical extirpation of the organs in which they are situated carries with it a degree of incidental nervous shock and after-consequences which renders them inadmissible in the treatment of neurasthenia, with one exception. When the victim of a neurasthenia of presumably pelvic origin is already past or near the menopause, and when the irritating lesion is one which interferes with the physio

logic regression of the organs the radical operations are sometimes justified, since in these cases they are aiding and not opposing the natural tendencies. Even in these cases, however, the conservative operations are to be preferred, whenever they are surgically correct and feasible. For youthful neurasthenics the radical operations should be ruled out of contemplation.

The gynecologist must not forget that neurasthenia is frequently due to lesions situated in other portions of the body. When, for instance, the neurasthenia is attended by a constitutional condition which suggests auto-intoxication, the gynecologist should not attempt to relieve it by operations directed to the relief of merely mechanical conditions in the pelvis, even though they may be provoking symptomatology. In such cases no operation should be undertaken until careful physical examination of the woman as a whole, if necessary with the aid of other specialists, has shown that there is no focus of auto-intoxication in the more distant organs (the ear, the tonsils or the digestive system). When a careful study of the history has convinced the gynecologist that a given attack of neurasthenia is the result of an overload due to localized suffering; when his physical examination has revealed a lesion capable of producing that symptomatology, and which is susceptible of prompt, complete and permanent cure by a conservative operation, he is warranted in believing that the performance of that operation will result in a lessening of the overload, will, in short, be followed by an improvement in general health that will restore the neurasthenic to that degree of health which she is fundamentally capable of.

67. **Home Treatment of Tuberculosis.**—Consumptives living at home, but kept at rest out of doors, Pratt says will recover in the majority of instances if the disease is not hopelessly advanced when the treatment is begun. A tuberculosis class with its members well fed following the rest treatment and provided with facilities for leading the out-of-door life in comfort will obtain results equal to those of the sanatoriums. The class method has been tried in cold climates and in warm, in favorable climates and unfavorable ones, in congested sections of large cities and in country districts. Under these varying conditions success has been achieved where the patients have been kept at rest, where the supervision has been adequate and where strict obedience has been enforced.

Journal of Kansas Medical Society, Kansas City

February, XII, No. 2, pp. 41-80

74 Physiologic Chemistry of Psychic Emotions. J. M. Winegar, Hamilton.
75 Cancer; Lack of Early Diagnosis and Disasters Caused by Improper Treatment. R. M. Bennett, Mound Valley.
76 Perineum, Function, Impairment of Function Due to Laceration-Repair. H. H. Heylmun, Hutchinson.
77 Symptoms and Frequency of Chronic Appendicitis and Gall-Bladder Disease, Diagnosed Stomach Trouble. J. R. Newman, Fort Scott.
78 Cholera Infantum. M. J. Tanquary, Independence.
79 The Poor School for the Poor Boy; Is It Necessary? F. A. Carmichael, Goodland.

Surgery, Gynecology and Obstetrics, Chicago

February, XIV, No. 2, pp. 115-214

80 *Cancer of Stomach; Its Surgical Cure. W. J. Mayo, Rochester, Minn.
81 Study of Effect of Constriction by Momburg's Tube on Blood-Pressure, Pulse-Rate, Respiration and Temperature. F. L. Adair, Minneapolis.
82 *Conservation of Sound Ovaries and Tubes in Hysterectomies Near Menopause, Except in Malignant Disease. R. L. Dickinson, Brooklyn.
83 Early Diagnosis of Intermittent Hydronephrosis. O. S. Fowler, Denver.
84 Elasticity of Cranium. A. McLean, Detroit.
85 Diagnostic Value of Shadowgraph Catheter. L. E. Schmidt and H. L. Kretschmer, Chicago.
86 *Carbuncle of Upper Lip. W. O. Bullock, Lexington, Ky.
87 Lane Operation for Chronic Constipation. G. T. Vaughan, Washington, D. C.
88 Atrophic Arthritis. A. R. Shands, Washington, D. C.
89 Publotomy in Face Presentation. A. H. Morse, Baltimore.
90 Subphrenic Abscess Complicating Appendicitis. J. Douglas, New York.
91 Prevention and Treatment of Ventral Hernia. E. S. Judd, Rochester, Minn.
92 *Method of Dealing with Sac in Large Inguinal Hernias. H. Fischer, New York.
93 Excision of Whole Shaft of Tibia; Replaced by Transplanting Fibula. G. Torrance, Birmingham, Ala.
94 Non-Descent of Testis and Its Rational Replacement. R. H. Fowler, Brooklyn.
95 *New Method of Circumcision. E. G. Edwards, La Junta, Colo.
96 Modified McBurney Incision. R. H. Fowler, Brooklyn.
97 *Improved Method of Fixation of Colon. F. G. Connell, Oshkosh, Wis.
98 New Axis Traction Handle. J. W. Farrior, Philadelphia.
99 Nitrous Oxid and Oxygen Anesthesia and New Apparatus. F. J. Cotton and W. M. Boothby, Boston.
100 Phlebectasis. G. S. Foster, Manchester, N. H.
101 *Trifles in Surgery Concerning Method in Skin Suture. W. Bartlett, St. Louis.

80. **Cancer of Stomach.**—In the 863 operations for gastric cancer the Mayos were able to do the radical operation in 307, the remainder being gastrojejunostomies or gastrostomies, for palliation, or explorations. The explorations did no good; occasionally they were harmful. Of the 303 explorations, in which hopeless disease was found, six patients died in the hospital. These deaths were not usually immediate, but the patients, lingering along a few weeks, were never able to return home.

82. Abstracted in THE JOURNAL, July 1, 1911, p. 160.

86. **Carbuncle of Upper Lip.**—Believing that, in many instances, sinus thrombosis and its sequelæ can be avoided, Bullock undertook to ascertain from a collection of recent cases the actual mortality and the proportion of fatal cases due to sinus thrombosis. Six out of twenty-six cases terminated fatally. While operating on a patient ligation and division of the facial veins was carried out by Bullock as a preventive measure against this complication. Conditions were ripe for the occurrence of cavernous sinus thrombosis; the facial veins were ligated and divided and thrombosis did not occur; and further, although the lip condition required a second incision, an orbital infection improved rapidly and without interruption. In three of the six fatal cases mentioned, there were symptoms of sinus thrombosis, accounting for a mortality of 11 per cent., nor does this include one patient, dying from cerebral abscess, nor one case in which the cause of death was not stated. The figures given, Bullock believes, are sufficient justification of any attempt to improve their results, and his paper was written to advocate the ligation and division or excision of the facial veins in all cases of carbuncle of the upper lip which do not at once clear up after the usual surgical treatment has been instituted, and in all neglected cases in which the orbital tissues show signs of infection. In some far advanced cases it may even be advisable to ligate the superior ophthalmic vein.

92. **Dealing With Sac in Large Inguinal Hernias.**—In the ordinary operation for hernia the sac is separated from the cord by blunt dissection, working at the outside of the sac with or without opening it. In large and old hernias with thickened and tightly adherent sac Fischer proceeds as follows: After cutting through the skin and having isolated the cord and the sac, the latter is primarily widely opened up to the inner ring. Its edges are secured by artery forceps. The contents of the sac are dealt with according to conditions found and then returned into the abdomen. Now an incision is made at the inner aspect of the sac close to the internal ring, transversely to its long axis, care being taken to cut only through the inner peritoneal covering. One can easily avoid the vessels and vas deferens which lie immediately below it, because they can be seen shining through this thin membrane. The peritoneal flap thus dissected off is secured with forceps and bluntly pushed off its underlying structures towards the abdominal cavity, which is very easily done, as the inflammatory changes in the sac here are the least. Now the opening at the neck of the sac is carefully sutured, taking care to go well beyond the internal ring. In order to do this it is necessary to retract the conjoined tendon well upward. After closing the opening the rest of the sac is peeled off from the cord, always working from within. After having removed the sac the anatomic relations of the cord are hardly disturbed. The space left after removal of the sac is obliterated by the approximation of the structures of the cord, which fall together by themselves; a special suture is not necessary.

95. **New Method of Circumcision.**—The operation devised by Edwards is done as follows: With two catch forceps grasp the foreskin anteriorly and posteriorly, drawing it well down. At this point, with the tissues on the stretch, pull down the skin still further with the forceps, being careful to grasp only the skin. Place the straight phimosis clamp at a slight angle

on the foreskin, having decided beforehand the amount necessary to be removed in order to expose the glans to the posterior third. The tissue to be removed is skin only. When the clamp is removed and the skin retracted there will be a circle of skin taken from the posterior third of the penis. Draw the edges of the cut surfaces together; stitch with subcutaneous or interrupted sutures; cut frenum if necessary. The result: The skin at this point, if squarely cut, and intimately approximated, will heal with but a faint line showing; this will be well back on the posterior portion of the penis and the foreskin will have all the smoothness of nature. The hemorrhage amounts to a few drops only. No anesthetic is required other than a few drops of cocain injected ahead of the clamp. Danger of infection is practically nil. The incision made at this point will not cause swelling of the tissues and it is much easier to keep dressings applied.

97. **Improved Method of Fixation of Colon.**—The method of separating the Jackson's membrane, and its formation into a cord that is attached to the colon or cecum is the same as previously described by Connell; but instead of its inclusion in the abdominal incision, he now passes it from a point within and behind, in the line of the dorsal insertion of the mesocolon, or the blending of the parietal and visceral peritoneum in an upward and forward direction between the muscle and fascia, in an extra peritoneal course, in a way similar to the intramural shortening of the round ligaments. In order to secure this result, curved forceps are inserted between the fascia and the muscle on the right side of the abdominal wound, and are passed laterally and dorsally in the abdominal wall, and made to present within the abdominal cavity by puncture of the parietal peritoneum at a point above and behind the origin of the artificial ligament from the bowel. The jaw of the forcep is opened and the free end of the ligament grasped and pulled through the abdominal wall, as the forcep is withdrawn; the end is then attached to the fascia. This procedure has been repeatedly carried out clinically and found practicable.

101. **Mattress Skin Suture.**—A continuous mattress skin suture has been devised by Bartlett. The needle is introduced a little to one side at the very end of the wound; is brought under the skin to a point directly opposite, and the proper tension maintained to permit an easy falling together of the raw edges. After the needle has gone through both lips of the wound, it is then reversed and carried back in the opposite direction, through both lips. This procedure is then repeated as often as necessary.

Lancet Clinic, Cincinnati

February 17, CVII, No. 7, pp. 177-202

102 Cases Illustrating Some of More Acute Forms of Mental Pathology Resulting from Alcoholism. C. G. Wholey, Pittsburgh.
103 Obstacles Which Tuberculosis Nurses Meet in Their Work. M. L. Empire, Cincinnati.

February 24, CVII, No. 8, pp. 203-228

104 Calculous Anuria. D. Loree, Ann Arbor, Mich.
105 *Relation of Renal Activity to Surgical Operations. E. O. Smith, Cincinnati.
106 Rational Treatment of Syphilis. E. D. Holland, Hot Springs, Ark.

105. Abstracted in THE JOURNAL, Nov. 4, 1911, p. 1557.

New York Medical Journal

February 24, XCV, No. 8, pp. 365-416

107 Relation of Intestinal Toxemia to Chronic Arthritis; Treatment. C. C. Sutter, Rochester, N. Y.
108 *Creative Surgery. R. Bellamy, New York.
109 Sarcoma of Inferior Maxilla; Report of Case. J. D. Whitall, Philadelphia.
110 Extradural Hemorrhage; Recovery After Trephining. B. T. Tilton, New York.
111 Vaccines in Tuberculosis. W. H. Watters, Boston.
112 Fibrous Tuberculosis of Peritoneum, Involving Omentum, Intestines and Uterus. C. L. Hall, Kansas City, Mo.
113 Anesthesia in Tonsil Enucleation. C. Garthwaite-Fisher, Flushing, N. Y.
114 Office Anesthesia for Small Surgery, Nitrous Oxid and Air, Self Administered. A. E. Guedel, Indianapolis.
115 Remarkable Resistance to Combined Ascaris and Hookworm Infestation. E. Echeverria, Limon, Costa Rica.

108. **Creative Surgery.**—Some days prior to the hatching of the chick, and certainly at that time, if one examines the membrane, a number of well-developed blood-vessels virtually forming a plexus can be observed in the inner or cell-bearing surface, while the outer side is glistening and apparently undisturbed with naturally its patency remaining, which allows a free interchange of gases. These cells Bellamy uses in his work. The wounded, destroyed, or partially destroyed portion being as nearly aseptic as possible, hemorrhage being controlled or infinitesimal hemorrhage being allowed, each piece of work of creative surgery being a law unto itself, the cells of the inner cellular substance covering the albumen of the egg are either detached, using a sterile spoon and specially designed forceps, or the strips of fresh cellular media are cut away and brought to, or near, the soil from which the new structures are to be produced before the cells are sown. The residue or partially evaporated saline water, procured from the ocean, is brought in contact with the place from whence the new growth is to spring. Sterile dressings and splints or gauze cushions, depending on the portion of the economy under consideration, are resorted to as required.

As the cells were preserved in salt water for a period of several days while carrying out some of the research, Bellamy says it is logical to believe that this might be done so that the cells might be used at all seasons.

In all cases, from time to time, new cells were introduced to facilitate the growth of structures or to hasten the growth of granulating surfaces; the growth of the different structures seemed to be in perfect harmony. The nerves were pronouncedly well developed, sensory motor as well as tactile corpuscles, as well as responsive to heat and cold. A number of clinical cases are cited to show the feasibility of this procedure.

Journal of Indiana State Medical Association, Fort Wayne

February, V, No. 2, pp. 59-110

116 Salvarsan in Sixty Cases. B. Erdman, Indianapolis.
117 Hyperthyroidism. T. M. Jones, Anderson.
118 *Infantile Paralysis, or Acute Anterior Poliomyelitis. W. D. Hoskins, Indianapolis.

118. Abstracted in THE JOURNAL, Oct. 21, 1911, p. 1391.

Delaware State Medical Journal, Wilmington

February, III, No. 3, pp. 1-28

119 Gastric and Duodenal Ulcers. E. S. Dwight, Smyrna.
120 Treatment of Ununited Fractures and of Delayed Union in Fractures by Injection of Blood. W. W. Babcock, Philadelphia.

Archives of Diagnosis, New York

January, V, No. 1, pp. 1-108

121 Acute and Chronic Pancreatitis. J. B. Deaver, Philadelphia.
122 *Bimanual Palpatory Percussion, Apparently a New Method in Physical Examination. H. Sewall, Denver.
123 *Significance of Lagging of Chest Wall as Sign of Intrathoracic Disease. F. M. Pottenger, Monrovia, Cal.
124 Non-Malignant Tumors of Colon. A. C. Wiener, Chicago.
125 Differential Diagnosis of Congenital Syphilis and Tuberculosis of Bones and Joints. C. G. Cumston, Boston.
126 Diverticulum of Esophagus with Development of Secondary Carcinoma in Sac; Report of Two Cases. H. Fischer, New York.
127 Gastrogenic Diarrhea. C. D. Aaron, Detroit.
128 Diagnosis of Thoracic Gland Tuberculosis During Childhood. L. C. Ager, Brooklyn.
129 Widal, Diazo and Russo Reactions—An Interdependence. B. G. R. Williams, Paris, Ill.
130 Case of Secondary Carcinoma of Lung. D. M. Hoyt, Philadelphia.
131 Diagnostic Value of Blood Cultures in Relation to Diseases of Ear. H. Hays, New York.
132 Two Cases of Perplexing Diagnosis. H. J. Boldt, New York.

122. **Bimanual Palpatory Percussion.**—The purport of this method is to differentiate the viscera by outlining their borders where they are more or less contiguous to the external surface of the body. The method has exactly the same scope and depends on the same physical laws as does that of the familiar auscultatory or stethoscopic percussion, but its convenience of application is said to be incomparably greater. When the trunk of the body is tapped with the finger, whatever organ lies beneath is set in vibration by the impact. This vibration radiates with a definite intensity throughout the homogeneous viscus, but is suddenly checked at the borders of the organ and is transmitted, if at all, greatly enfeebled to adjoining structures. For example, applying this principle in outlining a definite organ, as the heart. Having discovered by ordinary percussion the location of the abso-

lute heart dulness, the finger ends of the left hand, palm down, are gently laid on the middle of the area and, using the pulp of the middle finger of the right hand as a plessor, the chest wall is gently tapped along radii centering in the area covered by the fingers of the left hand. The percussion is begun well beyond the borders of the heart and gradually approaches the center. Just as soon as the percussing finger crosses the border of the lung which lies on the heart a sudden increase of vibration is felt in the palpating fingers of the left hand and one can mark the exact limit of absolute cardiac dulness on the radius which has been percussed. The complete outline of dulness is secured by similar percussions carried out along radii in all directions. The method is said to be especially useful in distinguishing two contiguous organs which give the same note to ordinary percussion as, for example, the left lobe of an enlarged liver and the spleen. The method is said to be of real assistance in the frequent contingencies under which ordinary percussion fails to resolve the physical problem. Thus, by it there is no difficulty in outlining the borders of an empyema when surrounded by a solid lung. No other method, on the whole, proves so satisfactory in confirming the percussion outline of the right border of the heart. The method in no way purports, as does ordinary percussion, to distinguish the physical consistency of the organ under examination. Collections of gas, fluids and solids are indistinguishable as such; only their outlines are determinable.

123. **Lagging of Chest Wall.**—After observing many cases of pulmonary involvement (especially tuberculosis), Pottenger has found that lagging is not confined to the apex of the lung, as has been so strongly emphasized, but that it shows itself over the entire side of the chest. The factor which suggests itself as being the most important is diminished motion of the diaphragm. Pottenger has observed this sign carefully in making several hundred chest examinations. Lagging, not only of the apex but of the entire side, is present as a sign of slight as well as extensive involvement of pulmonary tissue. It is present in early active tuberculosis of the apex where only a slight amount of tissue is involved. Lagging is present in many cases of chronic pulmonary inflammations where the active inflammation has subsided. In other cases of this kind, however, the respiratory motion seems to be fully regained. If there is a widespread chronic or quiescent pulmonary involvement in one lung and a slight active lesion in the other, very often the lagging will be greater on the side of the fresher lesion, even though the lesion be only a fraction of the other in extent. In some cases of this type, however, the disturbances in the diaphragm on the two sides seem to balance each other, making it practically impossible to determine whether or not the respiratory excursion is normal or decreased. Inflammations of the pleura, especially those of an acute nature, and particularly if situated at the base of the lung, produce the same general phenomenon of lagging as do intrapulmonary lesions.

Pennsylvania Medical Journal, Athens

February, XV, No. 5, pp. 339-422

133 *Treatment of Cardiac Arhythmia. G. W. Norris, Philadelphia.
134 Mycotic Aneurysm of Aortic Arch, with Presentation of Specimen. G. E. Holtzapple, York.
135 Pernicious Anemia. S. J. Repplier, Philadelphia.
136 *Case of Massive Pericardial Effusion. T. W. Kay, Scranton.
137 *Relation of Streptococci to Scarlet Fever with Active Immunization by Means of Streptococcic Bacterins. J. A. Kolmer, Philadelphia.
138 Preventable Blindness. W. W. Blair, Pittsburgh.
139 Blackboard Evil, Remedy; Copy-Book Evil, Remedy. J. N. Rhoads, Philadelphia.
140 Recognition and Treatment of Tumors of Pituitary Region. L. Litchfield, Pittsburgh.
141 Scarlet Red in Treatment of Wounds. J. Leedom, Philadelphia.

133, 136 and 137. Abstracted in THE JOURNAL, Oct. 21, 1911, pp. 1480 and 1481.

Vermont Medical Monthly, Burlington

February, XVIII, No. 2, pp. 27-52

142 Anterior Poliomyelitis. M. B. Hodskins, Palmer, Mass.
143 Injuries of Abdomen. E. J. Melville, St. Albans.
144 Deafness; Its Cause and Newest Treatment. H. E. Cook, New York.

Journal of Medical Association of Georgia, Augusta

February, I, No. 7, pp. 241-275

145 Treatment of Digestive Disturbances by Surgeon. R. P. Glenn, Columbus.
146 Cases Treated with Tuberculin. J. O. Baker, Savannah.
147 Rationale of All Treatment Applied to Pulmonary Tuberculosis. J. M. Anderson, Pinedale.
148 Some Diagnostic Points in Pellagra. G. M. Niles, Atlanta.
149 Potpourri. E. C. Cartledge, Atlanta.
150 Gas Gangrene. C. W. Roberts, Douglas.
151 Preventable Deafness. W. C. Lyle, Augusta.
152 Abscess of Liver. J. G. Tuten, Jesup.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinics, lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 17, I, No. 2668, pp. 345-408

1 Correlation of Symptoms and Signs in Some Abdominal Diseases. B. G. A. Moynihan.
2 Compressed Air Illness and Experimental Research. L. E. Hill.
3 Artificial Respiration with Oxygen. L. Brunton.
4 Intrinsic Cancer of Larynx: Operation by Laryngo-Fissure: Lasting Cure in Eighty Per Cent. of Cases. S. Thomson.
5 *Peculiar Case of Esophageal Dilatation. P. S. Hichens.
6 Case of Angioma of Oropharynx. W. Sanderson.
7 *Early Excision of Boils. J. Cropper.
8 Value of Vital Blood Staining in Study of So-Called "Infective Granule." A. Balfour.

5. **Esophageal Dilatation.**—The diagnosis in Hichen's case seemed to be stricture of the esophagus at the cardiac orifice with subsequent dilatation. At the post-mortem examination the esophagus was found to the right of the spine, greatly dilated and obscurely sacculated in its whole length. The muscular walls were greatly thickened and also the mucous membrane, which, however, was quite smooth and not congested. The walls of the esophagus were considerably thicker than the walls of the stomach. To gain the stomach the esophagus crossed the spine at a right angle. The mucous membrane of the esophagus showed no sign of ulceration, new growth, or any stricture. The cardiac opening of the stomach admitted the middle finger of the hand. There was much débris of food in the esophagus, very little in the stomach. Fluid poured into the esophagus seemed to pass with difficulty into the stomach. The origin of this condition is doubtful.

7. **Early Excision of Boils.**—An ethyl chlorid spray, a sharp cataract (Graefe's) knife, and a pair of dissecting forceps are all that Cropper requires. The skin over and around the boil is well frozen. This renders it firm and easily cut, which is a great point. With the cataract knife held perpendicularly to the skin surface, a circular disk of the whole skin of the size of a wheat seed or small pea is removed by sawing movements. Where there is much inflammation the diameter of the piece removed may by one-fourth inch, but it need never be larger if tackled early. The pain caused by this procedure is said to be trifling, even when carried out on the tender inner part of the leg, and the bleeding is insignificant, and should be encouraged by warm bathing. The subsequent treatment by any form of antiseptic dressing seems to be of quite minor importance. It can be fixed by strapping. There is usually a little suppuration, but, from the moment of the operation, the throbbing and intense soreness are at an end. The resulting scar, which is minute, is far less than the unsightly lumps so often left after ordinary treatment by poulticing, etc. Moreover, the danger of a secondary infection by the pus is reduced to a minimum. Where this method has been carried out properly complete success has resulted.

Lancet, London

February 17, I, No. 4616, pp. 413-482

9 Experimental Poliomyelitis. F. E. Batten.
10 *Some Forms of Hemorrhage which Are Difficult of Explanation. W. H. White.
11 *Malignant Disease of Testicle and Treatment of It by Radical Operation. H. M. Davies.
12 Partial Thyroidectomy Under Local Anesthesia, with Special Reference to Exophthalmic Goiter. T. P. Dunhill.
13 Tuberculous Disease of Bones and Joints: Present Position of Treatment in London. R. C. Elmslie.
14 *Tuberculosis of Mesenteric Glands in Children: Its Nature and Treatment. E. M. Corner.

15 Enterectomy Under Spinal Anesthesia for Acute Intestinal Obstruction in Infant Twenty-Four Hours Old; Survival for One Month. G. E. Waugh.
16 Case of Severe Vertigo: Destruction of Labyrinth; Cure. M. Yearsley.
17 *Removable Bladder Sutures. C. Clarke.
18 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

10. **Forms of Hemorrhage Difficult of Explanation.**—It is suggested by White that pathologic hemorrhages might be produced in a similar way that the menstrual flow is provoked (by a hormone secreted by the ovary) and he thinks it possible that they may be caused by endothelial toxins which act on the walls of the vessels from which the bleeding comes.

11. **Malignant Disease of Testicle.**—Davies holds that all tumors of the testicle must be regarded as malignant. The history of previous venereal disease, the association of the swelling of the testicle with an injury, the length of the history dating perhaps from childhood, must not be allowed to outweigh clinical evidence. He would always suspect a tumor of the testicle when there is an oval swelling which is not translucent and comparatively painless. When the tumor is in addition soft or elastic, and the surface shows slight lobulations, he regards his suspicions as confirmed. Increased pulsation of the cord is in favor of tumor, but is not pathognomonic. A solid tumor may be so elastic as to give the feel of a fluid swelling. The aberrant clinical manifestations of a testicular neoplasm must constantly be borne in mind. If the diagnosis is uncertain and the possibility of growth is entertained the tumor must be explored. Should the tumor be syphilitic, no harm will have been done; if tuberculous or a hematoma, operation is the correct treatment. When the diagnosis of tumor is confirmed the complete radical operation, consisting of removal of testicle, cord, lymphatics and surrounding fascia, and of the lymph-nodes in the region of the aorta and vena cava, must be done, unless the lumbar nodes are extensively involved, or there are evidences of metastases elsewhere.

14. **Tuberculosis of Mesenteric Glands in Children.**—The physical change in the bowel contents from fluid to solid (accomplished largely by the absorption of water and the deposition of mucus) is accomplished while the products of digestion pause and wait at the cecum. Besides food, a varied host of microorganisms is ingested which will flourish and multiply during the pause in the cecum. Hence, Corner says, they are at their maximum infectivity or septicity in the ileocecal region. To protect the body against this menace a large amount of lymphoid tissue has been formed in the ileocecal region. Hence the function of the appendix. There must be a continuous "ileocecal" strife between organisms and the lymphoid tissue. And so long as the lymphoid tissue prevails the host is in good health. If the microorganisms get the best of the ileocecal strife the host is in bad health, and may suffer from appendicitis, colitis, or infected glands in the mesentery. From this reasoning, Corner believes there can be no mistake in assuming that the great entrance of tuberculosis from the intestine to the body is by the lymphatics of the ileocecal region, and that, therefore, tuberculosis of the mesenteric glands originates from there. The children suffer from ill-health and abdominal pains referred to the umbilical region. These pains come on at night and sometimes after food. The loss of appetite, anorexia, is often accompanied by some disturbance of the action of the bowels, more often inactivity and constipation than looseness.

From a very considerable experience of such cases Corner says that tuberculous mesenteric glands and a somewhat dilated appendix containing fecal material, but otherwise not obviously diseasesd, are always found. The appendix is removed, whereby a great danger is obviated and a great source of discomfort from contractions on the fecal matter (appendicular colic), is avoided. A fortnight or three weeks after operation the patient is sent away to a country home. In nine cases out of ten the improvement is rapid and great. Shortly after the operation the appetite returns, and the patient eats and digests with enjoyment articles of diet which had been interdicted before. Hence there is no doubt, in Corner's mind, that the appendix is the great (and removable) source of danger and discomfort in these cases, and that no convalescent treatment should be undertaken until that is done.

17. **Removable Bladder Sutures.**—The tube sutures used by Clarke consist of the following parts: (1) Strands of ordinary strong silkworm gut; (2) short pieces of glass-tubing, 2 inches long and ¼ inch in diameter; and (3) small brass or steel rings, ½ to 1 inch across. The sutures of silkworm gut are passed with a curved needle through the muscular coat of the bladder on both sides of the opening. Each suture is inserted not less than ¼ inch from the edge of the incision and emerges on the cut surface, just short of the mucous membrane of the bladder. The two free ends of the suture are threaded through a glass tube and drawn tight; they are then secured in this position by being firmly tied over the rim of one of the metal rings. The loop of silkworm gut which projects from the end of the tube and passes through the bladder wall acts like the loop of a wire polypus snare and holds the two sides of the bladder incision firmly in contact with each other. The other end of the silkworm-gut suture, knotted over the edge of a ring, is on a level with the surface of the abdomen and is easily accessible for the removal of the suture. To remove a suture the silkworm gut is divided close to the knot, and the knotted end is then pulled on until the suture is withdrawn. One hand at the same time holds the glass tube steady in the wound. The silkworm gut remains quite taut after ligature in the tubes, and does not adhere to the bladder wall on removal.

Dublin Journal of Medical Science

February, III, No. 482, pp. 81-160

19 Case of Splenomegaly. W. A. Winter.
20 Case of Traumatic Pancreatic Pseudo-Cyst. T. G. Moorhead.
21 Pyorrhea Alveolaris. V. G. Best.
22 Epidemic Cerebrospinal Meningitis. H. S. Millar.

Medical Press and Circular, London

February 7, XCIII, No. 3796, pp. 129-156

23 Complications of Middle-Ear Suppuration. U. Pritchard.
24 *Proposed Sterilization of Mentally Unfit. M. J. Nolan.
25 *Some Hitherto Unrecognized Causes of Spinal Curvature. E. F. Cyriax.
26 Observations on Altmann's Granules in Cells of Normal and of Malignant Tissues. H. Cunningham.

February 14, XCIII, No. 3797, pp. 157-182

27 Ocular Palsies. J. Taylor.
28 Methods of Operating on Varicose Veins. A. Fullerton.
29 Supravaginal Hysterectomy Performed in Place of Induction of Abortion and Subsequent Sterilization for Repeated Melancholia Following Labors. W. S. A. Griffith.
30 Specimen of Rachitic Pelvis in which First Sacral Vertebra on Its Left Side Has Characters of a Lumbar Vertebra, Known as "Assimilation Pelvis." W. S. A. Griffith.
31 Treatment of Puerperal Septicemia by Bacterial Vaccines. G. T. Western.
32 Non-Surgical Treatment of Acute and Chronic Typhlitis. Moosbrugger.

24. **Proposed Sterilization of Mentally Unfit.**—Pointing out that the "baton sinister" of mental defect is to be found on the escutcheon of every family of known descent, Nolan submits that the proposal to sterilize the mentally unfit is unjustified by the past history of mankind, and by our imperfect knowledge of artificial methods in heredity; that it is a crude and rash proposition to deal with, a matter of extreme delicacy and importance and one which requires the most mature experience.

25. **Causes of Spinal Curvature.**—In Cyriax's opinion, diseases of the abdominal organs and of the heart can bring about spinal curvatures, especially of the scoliotic nature, in one of two ways: (1) Through localized contraction of muscles from reflex nerve irritation. (2) Through the assumption of vicious attitudes on the part of the patient in order to relieve symptoms. These two causes often coexist. The attempt to cure such cases by means of spinal corrective exercises alone is obviously unsatisfactory, and at the best only palliative, inasmuch as the real cause is left untouched.

Glasgow Medical Journal

February, LXXVII, No. 2, pp. 81-159

33 *Treatment of Carcinoma of Rectum and Pelvic Colon. W. E. Miles.
34 Skull of Dr. Pritchard. G. H. Edington.
35 Some Modes of Cardiac Failure. J. M. Cowan.
36 Treatment of Ringworm of Scalp. J. R. Riddell.

33. **Carcinoma of Rectum and Pelvic Colon.**—Miles has performed the radical abdomino-perineal operation forty-two times, in twenty-two men and in twenty women. Of these forty-two patients, seventeen died from the operation, giving an operation mortality of 40 per cent. Of the twenty-two men, eight died, mortality, 36 per cent.; of the twenty women, nine died, 45 per cent. The causes of death after the operation have been as follows: Peritonitis, five; hypostatic congestion of lungs, two; intestinal obstruction, one; gangrene of proximal end of colon, one; shock, three; cardiac failure, four; surgical kidney, one. The peritonitis was due to bacillus coli infection at the time when the bowel is divided. The five patients who died from this cause succumbed on the fifth day, and in all of them there was evidence of free gas in the abdominal cavity which produced a kind of surgical emphysema of the tissues in the vicinity of the colostomy opening. Among the twenty-five patients who have survived the operation, four have suffered from recurrence. One died three years and six months afterwards of general peritoneal carcinomatosis. Another suffered from recurrence in the prostate gland and the left corpus cavernosum penis, which manifested itself nine months after the operation. Another died of recurrence in the liver six months after the operation, and one became affected by a recurrent growth in the margin of the colostomy opening seventeen months after the operation. Of the remaining twenty-one patients, one, a female, died of pneumonia a year after the operation without manifesting any signs of recurrence, and a male committed suicide three years after the operation, though there was no evidence of recurrence at the time.

As to the present condition of those who have survived the operation and are alive at the present time: Of these there are nineteen, of whom ten are males and nine are females. The length of time ten of them have survived the operation without manifesting any signs of recurrence is as follows: Over four years, three; over three years, three; over two and one-half years, two; over two years, two. From his observations Miles deems it safe to draw the following conclusions: 1. Cancer of the rectum spreads both intramurally and extramurally. 2. The extramural spread takes place in three distinct zones. 3. A cancer situated in the lower part of the rectum may give rise to early metastases in the pelvic mesocolon and pelvic peritoneum. 4. A growth in the upper part of the rectum or in the terminal portion of the pelvic colon may give rise to spread situated in the peri-anal skin and in the ischiorectal fat. 5. That the tissues of the three zones of spread are vulnerable to spread wherever the primary growth may be situated in the rectum. 6. That although perineal operations can eradicate the tissues comprising the zones of lateral and downward spread, they are quite inadequate for reaching the tissues of the zone of upward spread. 7. That the only operative procedure which completely eradicates the tissues forming the three zones of spread is the radical abdomino-perineal.

Archives des Maladies de l'App. Digestif, Paris

January, VI, No. 1, pp. 1-60

37 *Delay in Elimination of Water in Urine as Sign of Liver Disease. (L'opsiurie dans les maladies du foie.) A. Gilbert and P. Lereboullet.
38 Agar as Vehicle for Drugs to Act on the Intestines. (L'agar-agar comme véhicule en thérapeutique intestinale.) M. Elnhorn (New York).
39 *Simple and Rapid Dosage of Amylase in the Stools. (Dosage de l'amylase fécale.) Goiffon and R. Tallarico.
40 Peptic Ulcer in Jejunum Opening into Colon. (Cas de fistule jéjuno-colique par ulcération peptique du jéjunum consécutive à une gastroentérostomie.) Urrutia.

37. **Opsiuria as Sign of Liver Disease.**—Gilbert and Lereboullet apply this term to a delay, an inversion in the normal rhythm of elimination of water, the water being eliminated more copiously the longer the interval after the meal. In health a pint of water ingested is generally passed within six hours, if the individual urinates every hour, and by far the larger amount is voided in the urine in the second or third hour. With liver disease, the water is eliminated much slower and later, and in some cases only one-tenth as much when the individual is up and about as when he is reclining. They have been studying this opsiuria, as they call it, for ten years in all forms of liver disease. It may accompany normal diuresis or the total urine voided may be above or below normal, usually the latter in case of portal hypertension. The opsiuria may be the first sign to call attention to the liver disease. As the portal congestion is more marked in the erect than in the recumbent posture, they insist on their patients reclining when taking the test and also when taking courses of mineral waters in general. Others have come to realize the advantages of this morning reclining at spas to get the greatest benefit from the waters.

39. **Test for Starch Digestion in the Stools.**—Goiffon and Tallarico write from Mathieu's laboratory to extol the advantages of their modification of Robert and Strassburger's method of testing for amylase by the length of the interval before a solution of starch mixed with a solution of feces loses the power to stain blue under addition of iodin. The 1 per cent. solution of starch is mixed with an equal part of a 10 per cent. solution of stool, neutralized and filtered. The mixture is kept at a constant temperature of 38 C. and at regular intervals a drop of the mixture is brought in contact with a drop of iodin solution. When it ceases to stain blue the digestion of the starch has been complete. The stool should not be too fresh nor kept on ice, and there should not be the slightest admixture of urine. It is often enough merely to mix the stool and starch solutions in a test tube, heat in hot water and apply the iodin test. If there is abundant amylase present, the starch will be digested in five minutes.

When great precision is desired, it is better to use a 5 per cent. solution of the feces and dilute further with an acid solution made with 10 parts normal solution of hydrochloric acid; 5 parts sodium chlorid, and water 1,000 parts. About 5 c.c. of stool are ground in a mortar with 50 c.c. of water. The mixture is poured into a test-tube and all above the 50 c.c. mark represents the volume of feces. Water is then added at the rate of 20 c.c. for each c.c. of feces. In another test-tube are placed 2 c.c. of the 1 per cent. starch solution, 5 c.c. of the above acid solution, and the whole is heated in water toward 40 C. Then, noting the time, 2 c.c. of the solution of feces is added and at regular intervals a drop is dropped on a drop of the official compound solution of iodin until all bluish or reddish discoloration ceases. For extreme precision, the index of the findings can be the time required for digestion of the starch, divided by the dry weight per hundred of the stools. The findings of the test throw light on pancreas functioning and on conditions in the large intestine.

Archives Mensuelles d'Obstétrique et de Gynécologie, Paris

January, I, No. 1, pp. 1-96

41 *Fibromas and Myomas of the Fallopian Tubes. (Etude sur les tumeurs fibreuses et myomateuses de la trompe utérine.) M. Auvray.
42 *Pubiotomy. (Sur l'hébostétomie.) T. H. van de Velde.
43 *Treatment of Acute Puerperal Peritonitis. (Sur le traitement des péritonites algues au cours de la puerpéralité.) A. Boquel.
44 Mortality of the Prematurely Born in Relation to the Causes of the Premature Delivery. (La mortalité des prématurés dans ses relations avec les causes de la prématurité.) Plauchu.

41. **Tubal Fibromas and Myomas.**—Auvray reports a case in which the oviduct was deformed and a large fibroma had developed on the end of the abnormal tube. He summarizes the details of the cases of tubal fibromyoma on record and ten cases of adenomyoma of the Fallopian tube. Only three or four cases in the list are from American literature. There was no recurrence in any instance of the tumor after salpingectomy with or without hysterectomy.

42. **Pubiotomy.**—Van de Velde emphasizes the importance of study of the pregnant woman in all cases, calling the specialist in consultation when there is suspicion of contracted pelvis. The specialist should utilize every means to render conditions as favorable as possible for delivery, taking advantage of every particle of the natural forces but with close supervision, not permitting the prolonged expectant management of the case to result in a "too late." When the true conjugate measures less than 7.5 or 7.8 cm. and the fetal head is of the normal size, cesarean section is the only operation indicated, he says, notwithstanding its drawbacks. But between these cases and those in which the disproportion between the skull and the passage is not very great and the presentation is normal, and the uterine contractions adequate under or without drugs, there are transitional cases in which pubiotomy is a valuable resource. A history of previous difficult deliv

eries may aid in determining the contracted pelvis; with a primipara the fact that the head is not engaged three or four weeks before term is suspicious. Once suspicion is aroused, the obstetric surgical specialist should be consulted and watch kept for kidney trouble or suppuration which might entail complications to operative delivery. He advises the woman's going to the hospital three or four weeks before term, if an operation is deemed necessary, or, if not certain of this, the woman should reside where she can be easily moved to the clinic if need arises.

43. **Acute Peritonitis in the Puerperium.**—Boquel restricts his intervention to simple laparotomy and drainage, through the abdominal wound and the pouch of Douglas, with the patients partly sitting up. The signs of diffuse peritonitis are often vague, but the general aspect, the condition of the tongue, voice and skin, are useful minor signs—in case of doubt, he says, incise and drain. The characteristic disproportion between the pulse and temperature was marked in only a few of his cases, and vomiting did not occur in all. The abdominal pain was not distinguishable from that with ordinary localized peritonitis, and the abdominal walls were soft in several of the women. Even a tardy operation proved successful beyond hope in some cases, while in the already doomed the operation did not seem to aggravate the condition. Nine of the fourteen patients on whom he operated recovered, while only five recovered of the thirteen given expectant treatment.

Bulletin de l'Académie de Médecine, Paris

February 6, LXXVI, No. 6, pp. 113-124

45 *Fatalities Under Salvarsan. (Les morts par le 606. Suite.) E. Gaucher.
46 Toxicity of Derivatives of Morphin. (Chloréthylmorphine et isopropylmorphine. Toxicité des dérivés de la morphine.) A. Mayor.

45. See Paris Letter in THE JOURNAL, March 2, p. 645.

Lyon Médical, Lyons

February 4, CXVIII, No. 5, pp. 217-280

47 *Tuberculous Skin Diseases. (La tuberculose inflammatoire de la peau.) A. Poncet and R. Leriche.

47. **Inflammatory Tuberculosis of the Skin.**—Poncet and Leriche emphasize that the skin affections for which tuberculosis is responsible are legion, and they cite a number of instructive cases to sustain this view. An inflammation for which tuberculosis is responsible is the key to a large number of pathologic cutaneous manifestations whose true nature hitherto has been a mystery, but they present evidence to show that they can all be traced to toxi-infection from the tubercle bacilli. Nodose erythema, for instance, is an affection that may be set up by various microbes, including the tubercle bacilli. Psoriasis, eczema, keloid, elephantiasis nostras, etc., can all be traced at times to tuberculous infection and affections of the appendages of the skin. He says that a history of some old tuberculous affection is generally traceable in every case of ingrowing nail; the trouble is usually that the soft parts encroach on the nail rather than that the nail grows in too deep.

Presse Médicale, Paris

February 7, XX, No. 11, pp. 113-120

48 Action on Bile Production of Injection of Hemoglobin. (Recherches sur la biligénie.) A. Gilbert, E. Chabrol and H. Bénard.
49 *Dangers of Menthol. (Dangers et méfaits du menthol.) R. Leroux.
50 *Symptom of Duodenal Ulcer. (Un symptome clinique de l'ulcère duodéno-pylorique.) L. Meunier.

49. **Dangers of Menthol.**—Leroux does not hesitate to accuse menthol of being always treacherous, frequently dangerous and sometimes fatal in its effects. He gives the details of the cases cited by Lublinski (mentioned in Abstract 64 below), adding to the list several unpublished cases, including the alarming reflex suffocation presented by his own infant after instillation of one drop of 1 per cent. mentholated oil for acute coryza. Besides the serious reflex accidents liable in young infants from its use, coming on with the suddenness and danger of a chloroform accident, he reports a number of other disturbances that have followed its use in the nose, acute or chronic conjunctivitis, reflex earache, tinnitus—chronic local changes from the continued use of menthol.

50. **Symptom of Duodenal Ulcer.**—Meunier states that with an ulcer in the duodenum near the pylorus if the patient drinks a pint of milk during the attack of pain the pain keeps up in the same intensity for five, ten or fifteen minutes; then suddenly the patient belches some gas and in a minute the pain is over. This occurs regularly each time when the ulcer is at this point. When the ulceration is in the stomach itself, the patient feels relief of the pain after a few swallows of milk and gradually all pain subsides. But with duodenal ulcer, roentgenoscopy shows that the pain ceases as the milk passes into the duodenum; the contraction of the stomach opening the pylorus and permitting the escape of the stomach content is also the signal for the escape of gases upward. The belching is thus a sign that the stomach content is being expelled, and the pain from the duodenal ulcer ceases as the stomach content reaches it.

Revue de Gynécologie, Paris

January, XVIII, No. 1, pp. 1-128

51 *Hypernephromas in the Broad Ligament and Ovary. (Les hypernéphromes génitaux de la femme.) H. Alamartine and G. Maurizot.
52 *Volvulus of the Stomach. (Le volvulus de l'estomac.) T. Tuffier and Jeanne.

51. **Genital Hypernephromas in Women.**—At present these tumors do not have much practical importance, the authors say, but as adrenal functioning becomes better understood, these tumors may be diagnosed from the special disturbances they induce. They describe a case in detail, the patient, a woman of 56, succumbing after removal of a large tumor in the broad ligament, developing from aberrant adrenal cells, involving adjacent organs and entailing cachexia like a cancer. They summarize ten similar cases from the literature and review numerous cases on record of accessory adrenals in the genital and other abdominal organs of both sexes. The peculiar malignancy of hypernephromas is another argument in favor of prompt excision of any tumor in the broad ligament or ovary which may possibly be of this nature.

52. **Volvulus of the Stomach.**—Tuffier and Jeanne encountered a typical case of volvulus of the stomach and looked up the literature on the subject which they here review, with thirty-one illustrations. They discuss the mechanism and location of the torsion, emphasizing that the situation of the vessels and not the aspect of the twisted stomach should be the guide to estimate the degree of torsion. As the stomach dilates, this has a tendency to correct the torsion, until the dilatation becomes so extreme that the stomach is incarcerated. Only one case in a child is on record. Under prompt operative treatment, 60 per cent. of the patients recovered; untreated, total volvulus is speedily fatal. This was determined, in addition, by experimental volvulus induced in dogs, although the dogs bore without harm a partial volvulus. In operating, the stomach should be anchored so that it will not twist again later.

Revue de Médecine, Paris

January, XXXII, No. 1, pp. 1-80

53 *Variable Clinical Course of Myelitis. (Sur les évolutions cliniques diverses des myélites toxi-infectieuses.) S. Bernheim.
54 Hemorrhagic Encephalitis in Patches. (Cas d'hemorragie cérébrale bilatérale récente de la corticalité.) C. Roubier and L. Nové-Josserand.
55 *Abdominal Pain Without Anatomic Lesions. (Les algies abdominales.) J. Cecikas.
56 Intracranial Simple Cyst. (Une variété rare de kyste intracranien.) Bouchut and Bouget.

53. **Myelitis.**—Bernheim refers to the myelitis occurring during or following infectious disease, industrial poisoning, etc. His experience has shown that a toxi-infectious myelitis may run an absolutely latent course, and be merely a necropsy surprise. In other cases, the only sign may be exaggeration of the foot and knee tendon reflexes. He found this manifest in sixty of a hundred typhoid patients, and he cites a few examples in detail, as also in cases of pneumonia, miliary tuberculosis and neurasthenia. In four cases of the latter after influenza this was the only spinal symptom. In four

other cases reported in detail, the symptoms of the myelitis were more pronounced, formication, numbness and darting pains accompanying the exaggerated reflexes, tenesmus and impotence in the arms. In six other cases reported, the gait was affected after typhoid fever, besides the exaggeration of the reflexes. In all the above cases the myelitis soon subsided without leaving a trace, but in six others it lasted for months up to two years, but then subsided. The infection had been influenza in most of these cases; in two the myelitis was of the type of amyotrophic lateral sclerosis or sclerosis in patches; such recovery is unusual. Besides these secondary myelites, he reports the details of two primary cases in which permanent disability was entailed; the brain symptoms subsided but spastic paraplegia was left. In three similar cases the primary myelitis recurred two or three times after intervals of months or years, finally resulting in typical sclerosis in patches. The myelitis progressing rapidly to a fatal termination is better known, perhaps, than the classes of cases to which he calls attention. Only in nine of the total thirty-four case-histories given were the patients children, between 8 and 16, and these were among the milder cases with complete recuperation.

55. **Abdominal Algias.**—Cecikas remarks that chronic constipation was invariably present in all his cases of abdominal algias, but that purgatives are contra-indicated in all forms of abdominal angina. Hot oil enemas at night must be the main reliance. In some cases of tabetic abdominal crises, the pains did not return after a systematic course of this kind for several weeks. The diet should aim to combat constipation and relieve the special organ suffering most, with measures to relieve abnormal conditions in regard to nutrition, circulation and innervation when there is no concrete anatomic lesion. Hydrotherapy is a valuable aid, as is also possibly the high frequency current. He was much impressed with the benefit from opotherapy in two cases; it seems to supply the lacking hormone of the organ at fault, which is unable to attract to itself the other hormones needed to keep it functioning normally. He used the corresponding organ from freshly slaughtered sheep, chopped, triturated with sand, mixed with four times its weight of Ringer's solution, and kept on ice. About 5 c.c. was taken at meals, in soup or wine.

Semaine Médicale, Paris

February 14, XXXII, No. 7, pp. 73-84

57 Hysterectomy in Treatment of Uterine Myoma. (Hystérectomie totale ou subtotale dans le traitement des myomes utérins.) R. de Bovis.

Berliner klinische Wochenschrift

February 5, XLIX, No. 6, pp. 241-288

58 Present Status of Surgery of the Lungs. (Der gegenwärtige Stand der Lungenchirurgie.) A. Fraenkel and W. Körte. (Concluded in No. 8.

59 Methyl-Alcohol Poisoning. (Ueber Methylschnaps-Vergiftung.) J. Hirschberg.

60 Anaphylatoxin and Bacterial Toxins. (Ueber Anaphylatoxin und Bakteriengift.) H. Aronson. Commenced in No. 5.

61 First Reported Case of Rat-Bite Fever in Europe. (Sokodu—Rattenbissskrankheit.) C. Frugoni.

62 Spasmodic Constriction of the Pylorus. (Zur Lehre von Pylorospasmus.) P. Manasse.

63 The Eosinophils of the Intestinal Mucus. (Ueber Eosinophilie des Darmschleims.) H. J. Wiener (New York).

64 *Menthol in Rhinology and Its Danger for Young Children. (Die lokale Mentholanwendung in der Nase und ihre Gefahr im frühen Kindesalter.) W. Lublinski.

65 Diagnosis and Treatment of Postpartum Hemorrhage. (Nachgeburtsblutungen.) E. Runge.

64. **Dangers of Local Application of Menthol in Infants.**—To relieve acute coryza, Lublinski put a small (*linsengrosse*) amount of 2 per cent. coryfin vaselin (coryfin is a preparation of menthol) in the nose of an otherwise healthy baby nearly a year old, and rubbed it around lightly with his finger. The child was seized at once with spasm of the glottis, cyanosis, its eyes rolled up, and the pulse became imperceptible. Under artificial respiration and wrapping the throat in hot sponges, the child was relieved but was still unable to breathe freely on account of the excessive secretion in the nasopharynx. After wiping this out with the finger, respiration became regular once more by the end of fifteen minutes after the first symptoms. Koch reported in 1910 a similar experience, after wiping out the nose of a three-weeks' infant with a tampon dipped in coryfin. Killian has reported similar symptoms in an infant after instillation of one drop of menthol oil (*Mentholöl*). A similar case has been reported recently by Delille, by Maliban and two by Mayet, and Leroux reported last year a number, including one terminating fatally. The age of the infants ranged from 1 to 15 months, and in three cases they were in physicians' families. In Gomez' case an otherwise healthy month-old infant died within ten minutes after a little 2 per cent. mentholized vaselin had been introduced into its nose to relieve coryza. The trouble is evidently a reflex process from irritation of the nasal branch of the trifacial nerve; on account of the existing inflammation in the nose this nerve is exceptionally sensitive. Besides the measures Lublinski applied in his case, others report benefit from traction of the tongue, swinging by the feet, hot baths, mustard baths or frictions. Ten years ago in Paris there was a symposium on the danger of spasm of the glottis from local application of menthol preparations in the nose, but the warning emphasized then seems to have been forgotten. (See abstract 49 above.)

Deutsche medizinische Wochenschrift, Berlin

February 8, XXXVIII, No. 6, pp. 249-296

66 *Diagnosis and Treatment of Cirrhosis of the Liver. (Leberzirrhose.) C. Bäumler. Commenced in No. 5.

67 *Operations to Relieve Pressure on the Brain. (Indikationen und Erfolge der operativen Behandlung des Gehirndrucks.) G. Anton. (Ueber druckentlastende Eingriffe bei Hirndruck.) E. Payr.

68 Operative Treatment of Injuries of the Lungs and Pleura. (Operative Behandlung der Pleura-Lungenverletzungen und Druckdifferenzverfahren.) E. D. Schumacher.

69 *Relations Between Trauma and Inflammation and Tumors. (Die Beziehungen von chronischer Entzündung, Narbe, Trauma und den Fortpflanzungsvorgängen zu der Entstehung von Tumoren.) A. Theilhaber.

70 Influence of Treatment on the Wassermann Reaction in Late Stages of Syphilis. (Einfluss der Therapie auf die Wassermannsche Reaktion bei Spätsyphilis.) J. Müller.

71 Influence of Soda on the Wassermann Reaction. H. Mayer.

72 Alcohol Injections in Trifacial Neuralgia. (Ueber die Behandlung von Neuralgien des 2. und 3. Trigeminusastes mit Alkoholinjektionen.) W. Alexander.

73 *Parasitism and Diseases. (Parasitismus und Krankheit.) Theobald Smith (Boston).

66. **Cirrhosis of the Liver.**—Bäumler concludes this postgraduate lecture by emphasizing the importance of prophylaxis of cirrhosis of the liver. He is confident that much more might be accomplished in this line. The cirrhosis is the terminal stage of long intoxication, especially from alcohol, but also possibly from lead, or other industrial poisoning. It may likewise be induced by chronic stasis of bile, by acute and chronic infectious diseases or by chronic congestion of cardiac origin—any of these injurious influences is liable to damage the liver cells, and the task of the physician in warding off or correcting such damage is an important and manifold one. The special feature of the syndrome induced is the disturbance from stasis and back-pressure of the blood in the portal vein. These same phenomena are liable to be induced secondarily by other affections involving sympathetically the liver or the trunk of the portal vein, such as peritonitis, especially tuberculous peritonitis, which, by the way, he says, is peculiarly liable to become superposed on existing cirrhosis of the liver. Careful differentiation is of paramount importance for treatment. In all stages dietetic treatment and regulation of the bowels are the principal thing. Milk should be the main feature of the diet, sweet, sour or buttermilk, watching over the urine, especially over the excretion of urobilin. Saline laxatives for a time may be needed, a warm solution of Carlsbad salts in the morning or cascara at night. In the early stages it is often an easy matter to restore conditions to normal in this way, especially when the trouble is due to abuse of alcohol. Organs are able to recuperate amazingly, and particularly the liver, if it is not being constantly subjected to new injury. If the liver is enlarged and hard, with more or less tendency to jaundice, the spleen somewhat enlarged and the abdomen distended, the wearing of an abdominal band may be useful to keep the over-heavy organs from sagging or being pushed about, thus interfering still further with the portal circulation. The binder should not be allowed to interfere with the movements of the diaphragm. With ascites, he warns not to wait too long before tapping; release of the fluid restores better conditions for the circulation.

Drugs which act on a weakened but still sound heart or on the kidneys or render the blood more fluid may sometimes cure the tendency to ascites with cirrhosis of the liver. Even salt, which aggravates dropsy with kidney or heart disease, may draw the water out of the tissues and expel it through the kidneys. He cites Savy's case to illustrate this: A man of 51 with atrophic cirrhosis of the liver had required tapping six times in two months, each time over twelve liters of fluid being withdrawn. He was kept on a milk and salt-free diet, but wearying of this he cast aside all restrictions and ate at will, using salt lavishly, up to 25 or 30 gm. a day. By the end of a few weeks the ascites had disappeared, and has not returned. Bäumler advocates omentopexy for suitable cases, not waiting too long; operations to divert the bile and remedy conditions with severe cirrhosis should be considered as needed.

67. **Puncture of the Corpus Callosum and Other Decompressive Measures.**—Anton discusses the affections and the anatomic disproportions which indicate regulation of the intracranial pressure, and describes the technic for puncture of the corpus callosum, which, he declares, by its ease, simplicity and harmlessness has amply justified its right to survive. (The technic was described in THE JOURNAL, Oct. 30, 1909, p. 1520.) The operation can be done under local anesthesia. By putting an end to the symptoms of general pressure it throws the focal symptoms more into prominence, and thus permits localization of curable lesions. None of the fifty patients treated by puncture of the corpus callosum has died, and in twelve of the seventeen cases of hydrocephalus the motor disturbances, paresis or spasms were favorably influenced. In nineteen cases stasis optic neuritis was benefited; in thirty-one cases the intense headache was cured; in twenty-seven cases vertigo and vomiting, and in twenty-six cases of a brain tumor the stupor or coma was relieved for a long time.

Payr gives a general oversight of decompressive operations, classifying the various palliative measures under five heads, and describing his experiences to date with his method of diverting the fluid from the ventricle into the blood stream. He has tried a number of technics and has operated in this way in twenty-two cases—in eighteen cases for hydrocephalus; seven of the patients have died; in four cases the results were most gratifying and permanent; in two others there has been recurrence, and the operation is of too recent date in the other cases to judge of the final outcome. In four cases the drainage was into the longitudinal sinus, in six into a vein in the neck. He uses a small artery from the calf for the drain, as described in THE JOURNAL, Oct. 14, 1911, p. 1327.

69. **Trauma and Irritation in Origin of Cancer.**—Theilhaber is convinced that atrophy of the tissues precedes the development of cancer. This local atrophy may be the result of old scars, chronic inflammation or destruction of soft tissues from trauma, as in childbirth, or senile atrophy of mesodermal tissue. The uterus and mammæ of women who have never borne children are less developed and hence less amply supplied with blood vessels, and consequently they display greater tendency to develop malignant disease. He queries whether the vast scars left by the modern excision of cancers do not enhance the tendency to recurrence. This idea is sustained by the frequent good results of the partial operations of thirty years ago. His experience has been that the younger the woman the lower in the uterus the cancer is located, which corresponds to what we know of the local circulation. In 347 cases of uterine cancer in his service, 27.5 per cent. of the women were nulliparæ, as also in 75 per cent. of his tubal cancer cases. He found that well-to-do women and Jewesses seemed more inclined to cancer of the breast and uterine myoma, the poor to cancer of the cervix or stomach.

73. **Parasitism and Disease.**—This address by the "exchange professor" emphasizes the importance of comparative pathology in the study of disease. Smith urges the necessity for perfecting the methods of animal experimentation so that they will resemble more closely than at present the conditions in the clinic. He also urges closer study of the natural parasitic affections in animals. The spontaneous diseases of even the guinea-pig, he remarks, have by no means been exhaustively studied although it has acquired almost a dozen infectious diseases within a short period. Study of this biologic problem will throw light on many others. If these natural epizootics are allowed to run their course, in time either the parasite or the host or both will die out or adjust themselves each to the other. He also urges research on the diseases of primitive peoples, whose mode of life resembles more that of our domestic animals.

Deutsche Zeitschrift für Chirurgie, Leipsic

January, CXIII, Nos. 3-4, pp. 197-426

74 *Operative Injury of Thoracic Duct. (Die operativ entstandenen Verletzungen des Ductus thoracicus. Ihre Bedeutung. Ihre Behandlung.) D. G. Zesas.
75 *Treatment of Subphrenic Abscesses. A. Wakar.
76 *Tuberculin in Treatment of Surgical Tuberculosis. (Ueber Versuche mit Tuberkulin in der Behandlung der chirurgischen Tuberkulose.) J. Bungart.
77 *Bilateral High Shoulder. (Ueber angeborenen Hochstand der Schulterblätter. Ein neuer Fall von doppelseitigem Hochstand.) K. Hayashi and M. Matsuoka.
78 *Primary Acute Circumscribed Colitis. E. Haim.
79 Inflammation of the Diverticulum of Meckel. (Beitrag zur Kenntnis der Entzündung des Meckelschen Divertikels.) A. Meyer.
80 *Subscapular and Retroperitoneal Kidney Hemorrhage. (Ueber das sogen. perirenale Hämatom und andere spontane retroperitoneale Massenblutungen.) A. Löwen.
81 *Abnormally Low Ribs. (Ueber den Rippentiefstand.) G. Ledderhose.
82 Histologic Research on Free Fascia Grafts. (Zur freien Fascientransplantation.) B. Valentin.
83 *Plastic Operations on the Dura. (Zur Duraplastik.) A. Brüning.

74. **Operative Injury of Thoracic Duct.**—Zesas has compiled fifty-eight cases from the literature and reports a case from his own experience, summarizing forty-nine case-histories. The operation had been done for tuberculous lymph-nodes in the neck in eighteen cases, for cancerous in thirteen; in nine cases for removal of a tumor in the neck and once for an aneurysm. The operative injury can be treated by tamponing, by ligation or clamping, by suture or by implantation of the injured duct in a vein. Of the twenty-one patients treated by tamponing, three died and in fourteen others there was a persisting fistula. Only in four cases was the effect good and permanent. When the injured duct was closed with a clamp or ligated, the effect was good in nine of the thirteen cases in which this was done. In the other cases there was oozing of lymph, but this gradually subsided, and no harm was apparent from the procedure in any instance. Zesas states that the wound should be sutured as the routine procedure, and ligation should be applied only when it is impossible to suture. No injury from the suture has been observed to date; thrombosis does not have the same importance in this duct as in a blood vessel. Schopf has proposed to implant the duct in a vein and Deanesly has done this with success in one case. Only when it is absolutely impossible to suture or ligate should any reliance be placed on tamponing alone.

75. **Subphrenic Abscess.**—Wakar presents evidence to show that the transpleural technic is not dangerous in itself, and compares his results with those in the literature, reviewing the experience of other Russian surgeons in this line. One of Waker's twelve patients with subphrenic abscess recovered spontaneously and five of the others after an operation through the diaphragm; all of the seven treated by a lumbar incision recovered. His experience confirms the comparative harmlessness of an operative pneumothorax. It is extremely important to place the patient so that the fluid contents of a gaseous abscess can be most readily reached with the puncture needle. In every case of a gaseous abscess the sheets of the pleura were adherent while this was never observed with the abscesses without gas. All his patients with gaseous abscess succumbed, with one exception, although the operation was a technical success, while all the patients with a non-gaseous abscess recovered except one. The affection was of about two months' standing in most of the patients. In the lumbar operation cases there had been preceding paranephritis in four; violent physical effort with furunculosis in two; in one each trauma and a bowel trouble, and in the three others typhoid spondylitis, periproctitis or furunculosis.

76. **Tuberculin in Surgical Tuberculosis.**—Bungart reports extensive experience with tuberculin in treatment of various

surgical tuberculous affections after removing dead tissue as conservatively as possible. One eighteen months' infant with severe bone and joint tuberculosis was completely cured in about nine months under increasing doses of tuberculin, injected into the back, from 0.0001 gm. to 0.3 gm., with local operative measures for the various foci. This and seventeen other cases summarized sustain his assertion that tuberculin treatment may be regarded as harmless in the hands of a cautious and skilled clinician. The way in which the patients —all children but one—increased in weight was striking, as also the subsidence to normal of the temperature. Tuberculin is especially indicated, he says, as an adjuvant to operative treatment. The course of the case under the tuberculin will soon show whether it is proving of benefit or not. The aim is not to immunize against as large doses as possible, but to maintain as long as possible the reacting capacity of the organism. In other words, the high doses which may be attained in the progress of the course are not the end in themselves but only the means to the end. The favorable effect was evident in some cases under small dosage and no better results were apparent in some cases in which the tuberculin was rapidly pushed to high doses. The mild immunizing dosage according to Sahli's principles seems the best technic. In conclusion he reports a case of extensive destruction from lupus of the entire face in which roentgenotherapy was supplemented by fourteen injections of tuberculin, from 0.0005 to 0.005 gm. in seven months, and the face entirely healed over.

77. **High Shoulder.**—The 125 cases of extreme dislocation of the scapula on record are reviewed and a case of bilateral high shoulder, the sixteenth on record, is reported, and the causes of the conditions are discussed.

78. **Primary Circumscribed Colitis.**—In the case reported by Haim, an abscess was found in the wall of the transverse colon and recovery followed its evacuation. He reviews a number of similar cases from the literature, the syndrome simulating appendicitis, and the origin and course showing that the same process as in appendicitis may develop at any point in the colon.

80. **Perirenal and Retroperitoneal Hematomas.**—Läwen states that all died of the five patients not given operative treatment while six in the ten operative cases recovered. In another case the retroperitoneal hemorrhage was from the psoas muscle in a hemophiliac.

81. **Low Ribs.**—Ledderhose has encountered a number of cases in which the ribs reached to the crest of the ilium or below. This finding generally indicated disease of the spine, and in examining the spine the distance between the eleventh rib and the crest of the ilium should be determined; normally in young people the distance is about four fingerbreadths, but the rib may touch the crest or reach below it inside.

83. **Plastic Operations on the Dura.**—Brüning has slit the dura in four cases and twisted the upper sheet around to cover a defect left after an operation on the skull for an abscess or fracture. The dura plastics was done under local anesthesia. He found it a help in separating the membranes to inject physiologic salt solution to force up the dura. He trephines exclusively now under local anesthesia, running a suture thread around the spot first.

Medizinische Klinik, Berlin

February 11, VIII, No. 6, pp. 219-262

84 *Systemic Gonorrheal Infection. (Die gonorrhoischen Allgemeinerkrankungen.) K. Zieler.
85 Roentgenoscopy of Duodenal Ulcer. (Der radiologische Nachweis des Ulcus duodeni.) M. Haudek. Commenced in No. 5.
86 *Prognosis of Epilepsy in Children. (Zur Prognose der Epilepsie im Kindesalter.) J. Zappert.
87 Roentgenotherapy in Gynecology. (Der derzeitige Stand der Röntgentherapie in der Gynäkologie.) M. Immelmann.
88 Hemorrhagic Diathesis. (Casuistischer Beitrag zur Frage der hämorrhagischen Diathese.) G. Löffler.
89 Hybrid Grafting. (Ueber Pfropfbastarde.) W. Wangerin.

84. **Systemic Gonorrheal Infection.**—Zieler reviews the various manifestations of systemic dissemination of the gonococcus with and without mixed infection, and warns that anything tending to aggravate an acute gonorrheal catarrh favors irruption of the germs into the blood—trauma, excesses of any kind, menstruation and pregnancy. Treatment of gonorrheal arthritis is mainly local as the salicylates are useless, but fixation of the joint should be done very cautiously as ankylosis is extremely prone to follow gonorrheal rheumatism, and immobilization does not prevent further metastasis. The best treatment, he says, is with the Bier constriction hyperemia. The constriction should not be applied too close to the joint, but it should be kept up for twenty or twenty-two hours a day, until there is distinct puffiness and the pain is entirely relieved as long as the band is worn; if pain recurs, the band is generally too tight. During the intervals, the arm should be raised; a splint should be applied only in case the pain is severe. The acute phase rapidly subsides under this treatment or under superheated air; with it suppuration is exceptional. The great advantage of these measures is that they permit passive movements from the start. Systemic gonorrheal infection is the main field for vaccine treatment with killed gonococci; it acts by stimulating the production of antibodies or other defensive substances; control with the opsonic index is generally superfluous. The chief advantage of vaccine therapy is that it gives us a weapon to attack manifestations of gonococcal infection which have hitherto been beyond our reach. Under the influence of the vaccine there is generally a reaction in the metastatic foci, which has great differential value in some cases. Dieulafoy has reported a case in which vaccine treatment had an unmistakably favorable influence on gonococcal endocarditis. Acute or subacute affections respond better to the vaccine therapy than the chronic, torpid forms. It is extremely important not to neglect local treatment at the same time. In many cases thorough local treatment of some focal complication quenches the source of the infection and cures the systemic disturbances. Picker has recently reported an instructive case of this kind, the patient having dragged along for three years with various manifestations of what was diagnosed as chronic progressive rheumatism or cryptogenic sepsis, rebellious to courses of treatment instituted by different urologists and others. The patient was a man of 32 who had acquired gonorrhea eleven years before, apparently cured by the ordinary two months' course of local treatment. Six years later pain in the right hip joint developed but subsided after two months of treatment for the supposed sciatica or arthritis; two years after this a peri-urethral abscess developed with cystitis and prostatitis and the arthritis returned. After a year in bed and various manifestations of gonococcemia and mixed infection, the patient came into Picker's hands and by digital investigation of the glandular adnexa of the posterior urethra and bacteriologic examination of their contents he was able to trace the source of the whole trouble to these obscure foci and by massage to restore conditions in them to normal and with this to cure the whole trouble. Zieler emphasizes the lesson to be drawn from this "disabled veteran of gonorrhea," and insists further on the importance of warning against anything liable to induce an exacerbation of an acute gonorrheal process.

86. **Prognosis of Epilepsy in Children.**—Zappert gives the case-histories of seven boys who all presented what seemed to be typical epilepsy and yet, after a time, improvement ensued so that a year or two to date has elapsed without further symptoms although previously the seizures had been frequent. Even if the cure is not complete and permanent, yet this intermisson of a year or so is a great gain for the mental development of the child. During the years the children were under observation there was nothing to shake the diagnosis of epilepsy. The patients are now from 9 to 18 years old. In another case a boy of 7 had two typical seizures with foam at the mouth, etc. He was vigorously purged and an ascaris was passed; during the two years since there has been nothing to suggest a tendency to epilepsy. Another boy of 5 has had no seizures for three years to date although before that he had had convulsions several times a day after the age of eighteen months; tetany had been diagnosed in this case. In another case a little girl had numerous attacks of sudden blank staring, dizziness, etc., with pavor nocturnus, suggesting a tendency to epilepsy, but these

attacks gradually grew less frequent and there has been none for the last two years. The child is now 6 and is rather backward in school but otherwise apparently normal. In three other cases Zappert found that apparently typical epileptic seizures were the first manifestation of a severe progressive brain or meningeal disease; later the seizures gradually ceased. Zappert thinks that these thirteen personal experiences of his justify the conclusion that the prognosis of epilepsy in children need not be inevitably unfavorable.

Monatsschrift für Kinderheilkunde, Leipsic

X, No. 10, pp. 499-578

90 Chemical Composition of Human Milk. II. (Die chemische Zusammensetzung der Frauenmilch auf Grund neuer Analysen.) E. Schloss.
91 Visible Gastric Peristalsis in Infants. (Ueber sichtbare Magenperistaltik beim Säugling.) T. Hoffa.
92 *Prognosis of Tuberculosis in Infants. (Prognose der Säuglingstuberkulose.) H. Hahn.
93 Case of Acute Hemorrhagic Nephritis in Girl of 10 After Impetiginous Eczema. R. Halberstadt.
94 Vitiligo and Chorea. K. Mallinckrodt.

92. **Prognosis of Tuberculosis in Infants.**—Hahn has traced the later history of sixty-nine tuberculous infants at the Magdeburg hospital. Forty-eight have died, two have been lost to sight, but nineteen are in more or less good health now, the ages ranging from 2 to 5 years. He tabulates the details of the various cases and the present condition. The findings confirm the assumption that the outlook is worse if the infection occurs before the infant is six months old. But the case-histories show that an unexpectedly large proportion of children infected in infancy grow up apparently healthy. The greatest source of danger seems to be superinfection. When this can be avoided the prognosis is far better.

Münchener medizinische Wochenschrift

February 6, LIX, No. 6, pp. 289-344

95 Strophanthus in Chronic Heart Disease. (Chronische Herzinsuffizienz und intravenöse Strophanthintherapie.) A. Fraenkel.
96 Action of Salvarsan and Arsenophenylglycin. (Zur Theorie der Wirkung des Salvarsan und Arsenophenylglycins.) J. Iversen.
97 Distant Thrombosis After Intravenous Injection of Salvarsan. (Fernthrombose nach endovenöser Salvarsaninjektion.) E. Klausner.
98 Pituitary Extract as Oxytocic. (Hypophysenextrakt als Wehenmittel.) P. Jaeger.
99 Treatment of Flat-Foot. (Plattfussbeschwerden und Plattfussbehandlung.) F. Lange.
100 *Technical Aids for Examination of Stools. (Winke zur Untersuchung der Fäces.) E. C. van Leersum.
101 *Industrial Argyria. (Ueber gewerbliche totale Argyrie.) F. Koelsch.
102 Culture Plate for Typhoid and Colon Bacilli. (Eine neue Platte zur Züchtung von Bakterien der Typhusколigruppe aus Fäces.) M. Mandelbaum.
103 Destructive Influence on the Skin of Radium Emanation. (Ueber den zerstörenden Einfluss der Radium-Emanation auf die Haut.) G. P. Mesernitsky.
104 Relations Between the Physician, the Pharmacist and the Manufacturing Chemist. (Arzt—Apotheker—Industrie.) M. Winckel.

100. **Examination of the Stools.**—The introduction of the stomach tube is liable to cause slight erosions which may induce enough bleeding to give deceptive findings when the stool is examined for blood. This, van Leersum says, is especially liable to occur with exfoliating gastritis and catarrhal achylia. With the former the mucosa is so fragile that even straining at stool may tear off scraps. When testing the stools for blood the patient should be warned to refrain from any movements straining the stomach or abdomen, and the stomach tube should not be used. It is better to refrain from eating meat during the period of the tests. Another element liable to mislead is the presence on the outside of the stool of menstrual blood or blood from hemorrhoids. This source of error can be obviated by washing the lumps in a three per cent. solution of hydrogen dioxid. This removes all the blood on the exterior and the guaiac test can then be confidently applied to the stool from the center of the lump. For the test for pancreas functioning by estimation of the digestion of the nuclei in the fibers of meat, he mixes the stools with a lot of water and sets aside in a tall vessel. When the heavier particles have settled out, the supernatant fluid is decanted into another vessel. The vegetable fibers then gradually settle to the bottom and the fluid above contains merely the meat fibers and fine detritus. Repeating this sedimentation process, the sediment finally contains most of the meat fibers in the stool, and their amount can be estimated and the nuclei stained and examined to estimate the extent of pancreatic digestion. With healthy digestion there is very little sediment; with poor digestion and with disease of the pancreas, the sediment abounds in undigested meat fibers. He has thus obtained an abundant sediment consisting almost exclusively of meat fibers in cases of diarrhea and in a case of pancreatitis. The yeast cells which induce fermentation are readily recognized in the stools under the microscope, showing up as bluish bodies, refracting light, oval, and grouped in chains or bunches. These cells are a little smaller than the cells of baker's yeast. Stools free from such colonies of yeast cells need not be examined further for fermentation processes.

101. **Total Argyria.**—Koelsch reports two cases of severe industrial total argyria. The patients were women of 27 and 50 who since the age of 13 or 14 had been employed in arranging in booklets sheets of silver leaf, like gold leaf. He knows of no treatment liable to prove effectual; drugs that might dissolve out the silver from the tissues would prove too toxic for the patients. The first indication of the silver line on the gums should be a warning to change to some other occupation.

St. Petersburg. medizinische Zeitschrift

January 14, XXXVII, No. 1, pp. 1-16

105 *Autodigestion of the Esophagus. (Fall von Oesophagomalacia.) W. Kernig.
106 Diagnosis and Treatment of Abdominal Contusions. (Subkutane Bauchverletzungen.) H. v. Haffner.
107 Means for Estimating Functional Capacity of the Heart. (Einige Methoden der funktionellen Herzdiagnostik.) H. Stillmark.

January 28, No. 2, pp. 17-32

108 Pharmacologic Research on Alkaloid of Mescal Buttons. (Zur Wirkung von Anhalonium Lewinii.) A. Waeber.
109 Cancer. (Ueber Krebserkrankungen.) A. Bertels.

105. **Autodigestion of the Esophagus.**—Kernig's patient developed fever the third day after abortion at the third month. Three days later he found the woman moribund, a patch of excoriation on the chin, and the abdomen distended with air. Poisoning with suicidal intent was assumed from the raw spot on the chin and the collapse, as poison suicides are common in the Obuchow hospital, 298 cases having been treated there in 1909 and 355 in 1910, and the excoriation on the chin being a frequent finding. But this patient's mouth and throat were normal and although she presented all the signs of peritonitis the abdomen was not rigid. The necropsy findings demonstrated that the peritonitis, originating in the genital organs, had induced repeated vomiting, and the woman was too weak to expel the vomit some of which stayed in the lower part of the esophagus and under its corrosive action the walls softened and ruptured, permitting the escape of air into the abdomen. The vomit lying on the chin had induced the excoriation.

Therapie der Gegenwart, Berlin

February, LVIII, No. 2, pp. 49-96

110 *Cod Liver Oil. (Beitrag zur Lebertrantherapie.) A. Czerny
111 *Emphysema of the Lungs. (Betrachtungen über das Lungenemphysem.) O. Minkowski. Commenced in No. 1.
112 *Differential Diagnosis and Treatment of Gastric Neuroses. (Zur Differentialdiagnose der Magenneurosen und ihre Beziehungen zur Therapie.) L. Kuttner. Commenced in No. 1.
113 Radio-Active Substances in Treatment of Cancer. (Die Behandlung bösartiger Geschwülste mit radioaktiven Substanzen.) S. Meidner.
114 Vibratory Massage in Asthma. W. Siegel.
115 Strabismus and Its Treatment. (Ueber Schielen und seine Behandlung.) P. Römer. Commenced in No. 1.
116 By-Effects of Salvarsan. (Ueber die Nebenwirkungen der intravenösen Salvarsaninjektion.) Berneaud.

110. **Cod Liver Oil in Therapeutics.**—Czerny ascribes the benefit from cod liver oil to the fact that it supplies fat in an easily digestible and convenient form, while fat is the element of the food lacking most in the diet of the poor and of almost all children. When children already have a sufficiency of fat in the diet it is folly to give cod liver oil, he says, as also to children with the exudative diathesis. The morbid tendencies of the latter are aggravated by fat in the diet; this was instructively shown in an experience at the children's clinic in his charge. He pushed cod liver oil in treating a number

of tuberculous children, giving them as much as they could take without appreciable disturbance. Some thus took up to 80 gm. of cod liver oil a day without apparent harm. The children did not make any special gain in weight on these large amounts of cod liver oil, but one after the other they developed eczema of the face and scalp so that in a few weeks the clinic was a regular hotbed of "scrofula." The cod liver oil was then dropped, and the tendency to eczema gradually subsided and has never been observed since at the clinic as Czerny's dietetic regulations keep the children permanently free from all such manifestations of the exudative diathesis, which is thus kept under control. In tuberculosis, however, he adds, it is important to steer the right course between giving the proper proportion of fat required for the tuberculosis while refraining from giving fat enough to rouse the exudative diathesis to any manifestations. Weigert's experimental research in 1907 confirmed what physicians had long known from experience in regard to fat in the diet, namely, that a large proportion of fat checks the development of tuberculosis while carbohydrates favor it. Czerny regards two tablespoonfuls of cod liver oil a day as about the proper dosage for tuberculous children on a diet otherwise poor in fat.

111. **Treatment of Emphysema.**—Minkowski comments on lack of elasticity in the chest wall as the main factor to be combated in treatment of emphysema. Operative measures aim to restore this lacking elasticity, and he thinks that chondrotomy for this purpose should be done before the condition has entailed atrophy of the muscles of respiration and severe disturbances in the circulation. Potassium iodid, he says, is still as of old the best expectorant for bronchitis with emphysema. Epinephrin has a favorable influence in asthma, probably from the anemia it induces in the mucosa of the finer ramifications of the bronchi, thus reducing the resistance to expiration. The benefit from sweating procedures, electric light baths, is probably from the same mechanism. All measures are rational and useful which aid in strengthening the muscles of respiration and promoting expiration of residual air. Of special importance is the strengthening of the diaphragm. Full deep baths modify the external pressure, and are particularly beneficial in treatment of emphysema, as also means to regulate the heart action. Many cases which used to be called emphysema of the lungs with bronchitis are now classed as insufficiency of the myocardium with stasis catarrh, and treatment based on this better conception of the condition is far more liable to be successful.

112. **Stomach Neuroses.**—With the progress of differential diagnosis, the assumption of a true gastralgia is becoming very rare, Kuttner remarks. Some direct or indirect, near, remote or reflex cause can almost invariably be discovered. Disease in lungs or pleura, heart, liver, kidneys, pancreas, genital organs, hernia or intercostal neuralgia may induce pain in the stomach, simulating a local affection. He cites a number of cases in which vomiting and other gastric symptoms were regarded and treated as a neurosis but were finally traced to a diverticulum in the esophagus or a kinking above the diaphragm, a chronic nephritis, meningitis, brain tumor or tabes. Recent examination of 100 patients with various nervous affections has shown that deviation of complement, lymphocytosis and the globulin reaction in the lumbar puncture fluid, even with no other symptoms on the part of the central nervous system, can be accepted as evidence of the central origin of the so-called periodic vomiting. In two recent cases the periodic vomiting occurred without headache, dizziness, syncope or tendency to apoplexy, and yet the trouble proved to be multiple sclerosis. Periodic vomiting with acetonemia, in children, is probably a manifestation of an inherited diathesis. Hyperchlorhydria may be the only manifestation of chronic appendicitis or gall-stones, and he reports two cases of this kind, the treatment having been directed exclusively to the hyperchlorhydria and the underlying affection having been neglected and allowed to progress to a dangerous point. Anorexia may be the only sign of tuberculosis, or a distaste for meat of gastric cancer, while an exaggerated appetite may be a sign of pregnancy or diabetes, gastric or duodenal ulcer or some serious mental or nervous disease—all of these must be excluded before assuming a true sensory neurosis of the stomach. A test for alimentary glycosuria may help throw light in these cases. The so-called dyspeptic asthma can generally be traced to arteriosclerosis or some other affection of the heart or vessels.

Wiener klinische Wochenschrift, Vienna

February 8, XXV, No. 6, pp. 227-258

117 "Cancers" in the Vegetable Kingdom. (Der "Krebs" der Pflanzen.) L. Hecke.
118 Resistance of Trachoma Virus. (Experimentelle Untersuchungen über die Filtrierbarkeit des Virus der Einschlussblennorrhoe und über die Widerstandsfähigkeit des Trachomvirus.) A. Botteri.
119 Dubious Sex. (Zur Kenntnis des "fraglichen Geschlechtes"—Homines neutrius generis, Virchow.) L. Arzt.
120 The Scaphoid Scapula. (Einige Bemerkungen über die Scaphoidskapula und ihre Begleiterscheinungen.) W. W. Graves.
121 *Tuberculosis of Buccal Mucosa. (Zur Kasuistik der Mundschleimhauttuberkulose.) F. v. Redwitz.

121. **Tuberculosis of Buccal Mucosa.**—In the case reported a lump was removed from the inside of the right cheek; it proved to be a tuberculous lesion although assumed beforehand to be of a cancerous nature. A recurrence at the same spot was removed a few weeks later. Three and a half years later a similar induration developed in the mucosa of the other cheek, which was also excised, as likewise a recurring lesion at the corner of the mouth. During the year since the patient, a man of 40, has had no further buccal lesions of the kind although there are signs of a bilateral apical process, so that the process in the mouth was probably not primary.

Zeitschrift für Kinderheilkunde, Berlin

III, Nos. 5-6, pp. 391-572. Last indexed February 3, p. 383

122 Volume and Specific Gravity of Living Infants. (Körpervolumen und spezifisches Gewicht von Säuglingen.) O. Kastner. (Körpervolum- und Körperdichtebestimmung am lebenden Säugling.) M. Pfaundler.
123 Hydrocephalus and Syphilis. (Hydrocephalus und Lues.) W. Knöpfelmacher and W. Schwalbe.
124 Action of Salts on Infants' Organism. (Die Wirkung der Salze auf den Säuglingsorganismus auf Grund früherer und neuerlicher Untersuchungen.) E. Schloss.
125 Growth and Osmotic Pressure in Young Dogs. II. (Wachstum und osmotischer Druck bei jungen Hunden.) P. Schulz.
126 Characteristics of Prehistoric Skeletons in Cretins. (Neanderthalermerkmale bei Kretinen.) Finkbeiner.
127 Preserved Human Milk for Infant Feeding. (Praktische Erfolge der Ernährung mit konservierter Frauenmilch—Bericht über 100 Fälle.) E. Mayerhofer and E. Pribram.
128 Vasoconstricting Substance in Infants' Blood-Serum. (Ueber gefässverengernder Substanzen in Säuglingsblutserum.) S. Samelson.

Zentralblatt für Chirurgie, Leipsic

February 10, XXXIX, No. 6, pp. 169-208

129 *Doubled Periosteum Flap as Substitute for Joint Ligament. (Bildung eines Gelenkbandes durch freien Periostlappen.) M. Katzenstein.
130 *Prevention of Postoperative Ischemic Paralysis. (Zur Verhütung der Drucklähmungen nach Esmarch'scher Blutleere.) H. Gocht.

129. **Joint Ligament Made from Free Periosteum Flap.**—Katzenstein reports a case in which he remedied severe functional disturbances in the calcaneoscaphoid articulation by supplying a new ligament for the ruptured one. As the new ligament must be one that would grow solidly to the bone, he selected periosteum for the material; to prevent bone growth he folded the strip of periosteum lengthwise, the ossifying surfaces in contact except where a small area was left where the ossifying surface was fitted to a raw surface made for it in the malleolus and scaphoid bone. The part was put in a plaster cast for seven weeks, the foot in the varus position. When the cast was removed conditions were apparently normal. The tibionavicular ligament in this case had been torn by the woman's heel catching in a stair carpeting and holding there as she fell. A chronic, very painful luxation resulted, but all disturbances ceased after the operation two years after the accident. Katzenstein cites other experiences to confirm his view as to the great importance of the joint ligaments for normal functioning of joints. Injury, even merely overstretching, may seriously interfere with function. He used the joint capsule to make a ligament in a previous case, but found that the free periosteum flap has superior advantages. It will be found particularly useful, he thinks, for disturbances resulting from overstretching of the deltoid ligament.

130. **Prevention of Postoperative Ischemic Paresis.**—Goeht applies under the constricting band or belt a little bag containing "factis." This is ground rubber, and it is used in the manufacture of truss pads, etc. A bag of it makes a cushion which spreads the pressure while exerting an elastic, even pressure over the region. Under the Esmarch band or the Momburg belt it protects against pressure paralysis, etc.

Zentralblatt für Gynäkologie, Leipsic

February 10, XXXVI, No. 6, pp. 161-192

131 *The Electrometrogram. J. Veit.
132 Course of Pregnancy and Delivery with Uterus Bicornis. (Beitrag zum Schwangerschafts- und Geburtsverlauf bei Uterus bicornis unicollis.) R. Klages.
133 *Wire Decapitator. (Der Kezmarszky'sche Dekapitationssecrateur.) B. Nadory.

131. **The Electrometrogram.**—Veit has coined this term to represent the application to the contractions of the uterus of the principle of the electrocardiogram. He had intended to use Einthoven's filament galvanometer, thus applying the same technic as in electrocardiography, but found it impossible to procure this galvanometer. A Bock and Thoma oscillograph was at his disposal, however, and he found that it worked equally well, recording faithfully the electric fluctuations in the uterus accompanying the muscular contractions. The tracings are so clear and characteristic that they afford a most interesting and reliable means of studying the action of drugs on the uterus. The current must be conducted away by the feet instead of the arms, as otherwise the heart action may disturb the record.

133. **Decapitator.**—Nadory cites a number of advantages of the Kezmarszky instrument, a piano wire with a loop in each end, the ends drawn down through a handle carrying a thumbscrew which winds the wire down to make the loop smaller and smaller. The obstetrician's hand is worked into the uterus until the thumb and finger can encircle the neck of the fetus. Then one end of the wire is introduced along the thumb until the finger can seize the loop in the end and draw it around the neck and out. The looped ends are then wound down by turning the screw in the handle, thus severing the head with ease and precision. The instrument has been in use at Budapest since 1882 and has fully established its superiority as Nadory shows by seven case-histories. He has improved on the original model by having a ring worn on the thumb to guide the wire as it is first introduced, as he shows in an illustration.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 17, XXXII, No. 151, pp. 1595-1610

134 Official Report on the Plague in Manchuria. (A proposito dell'ultima epidemia di peste polmonare in Manchuria.) G. Galeotti.
135 Tuberculosis of the Intestine. (Ricerche cliniche sulla tuberculosi intestinale.) L. Cecconi.

Policlinico, Rome

January, XIX, Surgical Section No. 1, pp. 1-48

136 *Bone and Joint Grafts. (Di alcune ricerche sperimentali sul trapianto libero osteo-articolare.) R. Dalla Vedova. Commenced in No. 12, xviii.
137 *Treatment of Ankylosis of the Jaws. (Sul serramento stabile delle mascelle per anchilosi ossea temporo-mascellare.) R. Malatesta.
138 Syphilitic Synovitis. (Di un rarissimo caso di sinovite papillare luetica considerato forma iniziale di lipoma arborescente delle guaine tendinee.) O. Finzi.

136. **Bone and Joint Grafts.**—Dalla Vedova gives thirty-nine radiographs and nine colored pictures of the findings in rabbits grafted with parts of bones and joints taken from other regions on the same animal. No histologic healing was evident in the cases, but the grafts grew into place and the less differentiated elements proliferated. Satisfactory functional results were obtained in his experimental research as he describes in detail.

137. **Ankylosis of the Jaw.**—Malatesta reports the case of a man of 33 who had developed ankylosis of the jaw in childhood in consequence of an abscess in front of the tragus with osteomyelitis of the ascending ramus of the jaw. The deformity was corrected by merely sawing the joint and next day interposing a silver plate. The teeth had developed very defectively but satisfactory conditions were restored by the operation and some dentistry, and the man is now, two years later, free from all disturbances. Orlow found fifty-four cases of bony ankylosis in 104 cases of ankylosis of the jaw on record, and others have been published since, bringing the number to over seventy. In fifteen cases the ankylosis was bilateral. In the case reported the characteristic deviation of the chin toward the sound side was pronounced. In four other cases on record a silver plate was interposed, as in the present case, but there was a persisting fistula in two cases. Malatesta thinks that the delay of a day before introducing the metal plate aided in the successful outcome, as it permitted absolute hemostasis.

Riforma Medica, Naples

January 20, XXVIII, No. 3, pp. 57-84

139 Experimental Research on Reconstruction of the Vaginalis of the Testicle with Flap from the Peritoneum. (La ricostruzione della vaginale del testicolo con lembi di peritoneo.) A. Liberale.
140 Changes in the Heart Under Influence of Epinephrin. Experimental Research. (Sulle alterazione del cuore da adrenalina.) P. Pisani.

January 27, No. 4, pp. 85-112

141 Meralgia Traced to Nodose Neuritis. (Caso di meralgia parestetica da neurite nodosa.) L. Preti.
142 Improved Technic for Bassini Operation for Hernia. (Una piccola variazione al metolo Bassini. L'aggiunta di un punto di seta.) U. Grimaldi.

February 3, No. 5, pp. 113-140

143 *Chemical Reaction in Urine, After Administration of Thiocol, as Sign of Liver Disease. (Una nuova reazione chimica nelle urine degli individui che prendono solfo guaiacolato potassico: suo valore nella diagnosi d'insufficienza epatica.) D. de Sandro.
144 Experimental Tuberculosis of Bile Apparatus. (Ricerche sperimentali sulla tubercolosi del fegato e delle vie biliari.) G. Carere. Commenced in No. 4.

143. **Thiocol Test of Liver Functioning.**—De Sandro states that persons who have been taking potassium guaiacol-sulphonate (thiocol) for several days do not eliminate it in the urine as such or in the form of its separate ingredients, none of which gives the characteristic reactions in the urine, but the urine of such persons turns green on addition of ferric chlorid. If, however, the liver functioning is defective, the urine does not display this color reaction on addition of ferric chlorid. There is not a trace of green in the urine in cases of advanced liver disease. He found the reaction negative in a case of severe malarial anemia with enlarged and hard liver, free from urobilinuria but with indicanuria, the kidneys sound, and he is now investigating the behavior of the stain in kidney disease. In a patient with tuberculous peritonitis the urine reaction was positive after taking thiocol, and the assumption that the liver was sound was confirmed by necropsy. An aqueous solution of the drug turns violet on addition of the ferric chlorid.

Sei-I-Kwai, Tokyo

January, XXXI, No. 1, pp. 800-113

145 The Pathological Anatomy of the Pneumonic Plague in Manchuria. A. Fujinami.

Brazil Medico, Rio de Janeiro

January 15, XXVI, No. 3, pp. 21-30

146 North American Triatomas. (Notas de entomologia medica e descripçao de duas novas especies de triatomas norte-americanos.) A. Neiva.
147 Nephroptosis. A. Vianna.

January 22, No. 4, pp. 31-40

148 *Momburg Belt Constriction in Obstetrics. (A applicaçao do processo de Momburg nas hemorrhagias do delivramento.) S. Kossobudzki.
149 Cancer of the Kidney. (Cancro do rim.) L. Freire.

February 1, No. 5, pp. 41-50

150 Children's Untruths. (Sobre a mentira infantil.) P. Olinto.

148. **Belt Constriction in Obstetrics.**—Kossobudzki expatiates on the simplicity and effectualness of arresting postpartum hemorrhage by the Momburg technic, winding a two-yard piece of rubber tubing around the patient's waist. In a case reported the tube was removed after twenty minutes, the uterus having contracted sufficiently during the meanwhile to arrest the hemorrhage. He cites a number of authorities on the subject, emphasizing in conclusion that severe anemia strictly contra-indicates the measure, as also an aneurysm, arteriosclerosis or any severe cardiovascular affection. The tube should be drawn just tight enough to arrest the pulse

in the femoral arteries, neither more nor less. It should be tightened and removed very slowly and gradually. He makes a point of telling the family beforehand that this measure is necessary but is not entirely free from danger.

Semana Medica, Buenos Aires

January 11, XIX, No. 2, pp. 49-92

151 *Osteoplastic Amputation of the Leg. (Contribucion al estudio de la amputacion osteoplastica de la pierna. Procedimiento del Prof. L. Valle.) A. F. Landivar.

January 18, No. 3, pp. 93-136

152 *Amino-Acids in Urine as Test of Liver Functioning. (Determinacion de los amino-acidos de la orina como medio de exploracion funcional hepatico.) M. R. Castex.

151. **Osteoplastic Amputation of the Leg.**—Landivar gives ten illustrations of the technic and roentgenoscopic findings with Valle's method of amputating the leg at the lower third. The ease and simplicity of the technic commend it while the flap of skin, bone and periosteum left supply a good covering for the stump. The incision is shaped like a U, upside down; the long part left in the center is the flap to be turned back later. The tibia is cut across below the site for the real amputation, and is then sawed lengthwise and then across on the level with the sawed stump of the fibula. This leaves a shallow, square piece of tibia adherent to the periosteum flap. As the flap is turned down over the stump this plate of tibia fits over the cut surface of the tibia, where it is fastened with a few catgut sutures. The ultimate outcome of this technic is said to be exceptionally good. Five cases are reported in detail.

152. **Amino-Acids in the Urine as Index of Liver Functioning.**—Castex applied the various tests according to the phosphotungstic and other technics, and studied the findings in health and in various diseases, following the same lines of research as Frey, Falk and others on the amino-acids in the urine. The findings in forty cases are tabulated for comparison, and in another table the repeated findings in two cases of pneumonia, one showing exceptionally high aminuria, with recovery, while in the fatal case the proportion of amino-acids was abnormally low. A high content was also noted in cases of diffuse liver disease, in febrile tuberculosis and, highest of all, in a case of pseudoleukemia.

Ugeskrift for Læger, Copenhagen

February 8, LXXIV, No. 6, pp. 217-250

153 *Epidemic Poliomyelitis and Its Treatment. (Den Heine-Medin'ske Sygdom og dens Behandling.) H. C. Slomann.

153. **Treatment of Epidemic Poliomyelitis.**—Slomann says that during the acute phase the treatment should be that for acute infections in general, rest, hygiene, etc., with measures for symptoms as they arise. Calomel may prove of aid as in some cases the portal of entry is evidently in the gastro-intestinal tract; hexamethylenamin is still on trial. After the acute stage is past, massage and exercise should be applied to keep the muscles in good condition, and the physician's first task is to determine which muscles require special strengthening. This requires testing the functioning of every group of muscles. The massage should be done briefly, with frequent pauses. Dry warm packs for the extremities, especially at night, will help to regulate the defective circulation in the paralyzed limbs, and warm baths are also useful as the paralyzed muscles contract more easily when the weight of the body and other muscles is eliminated by the support of the water. Slomann does not regard electricity as of much use in poliomyelitis as the faradic current acts only on muscles not giving the reaction of degeneration, while the electric measures are liable to weary and render the child nervous. The physician must be on the watch to detect any tendency to contracture; Slomann has observed incipient contracture of the Achilles tendon nine or ten days after the onset of the disease. Any muscle displaying this tendency must be systematically fully stretched several times a day, and any articulation showing a tendency to deformity must be exercised in all directions and kept in a position of overcorrection, bandaged thus if necessary. He cites Wickman's eight types of poliomyelitis, the spinal, bulbar, cerebral, meningitic, polyneuritis, ataxia, acutely fatal and the abortive forms. He says that the disease in justice should be called the Heine-Medin-Wickman disease, and states that during 1911 Norway had about 800 cases recorded, Sweden 3,000 cases, Germany at least 1,000, and Austria in 1909 had 600.

Upsala Läkareförenings Förhandlingar

XVII, No. 3, pp. 141-270. Last indexed January 20, page 234

154 *Arythmia in Children. (Om arhytmi, särskildt hos barn.) R. Friberger.

155 Occurrence of Fat in the Thymus Parenchyma. (Om förekomsten af fett eller fettliknande substanser i thymusparenkymet.) R. Holström.

156 Physiology of Fixation of the Ocular Image. (Ogats rörelser under fixering.) H. Ohrvall.

157 Influence of Fertilization on Osmotic Pressure in Amphibian Ova. (Befruktningens inflytande på osmotiska trycket hos ägg från Bufo vulgaris och Triton cristatus.) E. L. Backman.

154. **Arhythmia, Especially in Children.**—Friberger makes an important contribution to this subject by his report of the results of systematic examination of 321 unselected school children between the ages of 5 and 14. He gave each child a question-blank to be filled out with the aid of the parents, stating whether the child had had scarlet fever, diphtheria, acute articular rheumatism, chorea or other serious illness, and whether the child had been inclined to be short of breath after running, more than its mates. The questions in regard to articular rheumatism were particularly minute so as to exclude any other affection causing pains in the limbs which might have been confused with it. The record of each child further included the weight, height, blood-pressure, examination for albumin, heart and lung findings and the results of a jumping exercise for one minute, the pulse being recorded before, immediately after and a minute later. The pulse was palpated and a graphic tracing taken. The respiration rate at the same time was recorded or a graphic tracing taken of the jugular venous pulse. The time-rate of the pulse was recorded at the same time in tenths of a second. The children were given a few pennies for their cooperation and seemed to take an interest in the examinations and be conscientious in filling out the blanks. He thinks that psychic factors may be excluded as the children were not excited or afraid, having observed the examination of other children. Sixty-four of the children were examined anew at a later period and the findings were approximately the same. He does not know of any similar systematic research on old or young, and yet the lack of such records leads to erroneous conclusions from examination of the sick, as conditions which are physiologic at the age of the subject are assumed to be the consequence of the pathologic condition at the time. Thus Friberger's conclusions are totally at variance with Heubner's; the latter drew his conclusions from long series of sick children. Among the 321 school children Friberger found that only 37.4 per cent. had a regular pulse; in 12.2 per cent. there was extreme irregularity, and in 50.4 per cent. moderate arhythmia. Comparing these with the small series of similar findings in healthy adults by Hüsler, Janowski and von der Mühlls, shows that 65 per cent. of the children had differences of 0.2 or 0.3 of a second, and 22 per cent. still greater differences, while in the healthy adults the differences ranged from 0.025 to 0.3 second. The arhythmia in the children was generally what Mackenzie calls "the youthful type of irregularity." Boys and girls seemed to present it about equally, and no special influence could be discovered from the size or muscular development. The irregular pulse occurred with no more frequency among the children who had passed through some acute infectious disease than in the total material. Thirty-eight children presented signs of an unstable nervous system, but only 27 per cent. in this group had arhythmia, while the average for the rest of the children was 39 per cent. Twenty-three of the children had advanced pulmonary tuberculosis, and 42 per cent. in this group had arhythmia.

Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on the second, fourth or sixth advertising page following.